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ARCHITECTVRE*
Published by Charles Scribner's Sons
THE PROFESSIONAL ARCHITECTVRAL MONTHLY
VOL. LI MAY, 1925 NO. 5

The History and Use of Vanes

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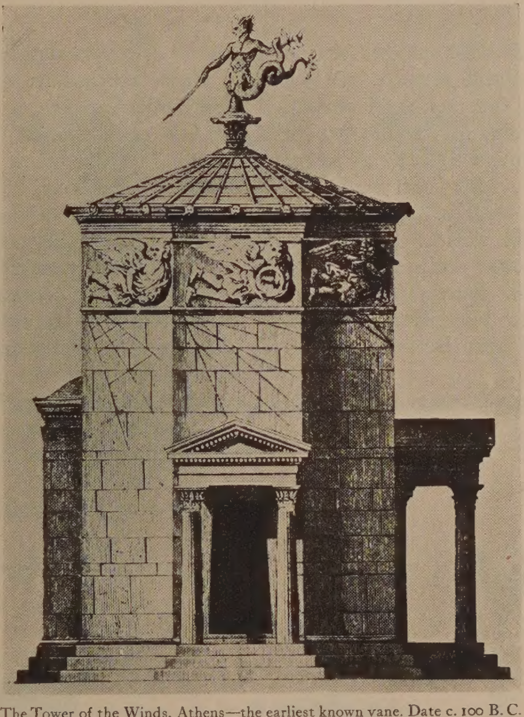
IT is strange that we know so little about the vane, although it has been in use for over two thousand years as a device for giving visual indication of the direction of the wind, or as an emblem of symbolism. From the building of the "Tower of the Winds" by Andronicus of Cyrrhus, at Athens, on down through the ages to our present day, vanes have been in almost constant use, yet their origin is obscure, the literature relative to them meagre, and but few know their meaning or why they are used.



The Tower of the Winds, Athens—the earliest known vane. Date c. 100 B. C. Restorative drawing by a German archæologist.

What the first vane was like, for what purpose it was used, or how it came to be used, we have no knowledge. Perhaps the idea was suggested to semi-civilized man by the flowing of a primitive banner of skin or cloth. Some such natural phenomenon must have suggested to early man the setting up of a device as a means of showing the direction of the wind, an idea which seems to have made an ever-increasing appeal to the mind of man, especially during the mediæval period.

Man has always responded to the action and influence of the elements in nature. This was especially true of the earlier civilizations—when man was filled with wonder and superstition at the ever-changing conditions of nature about him. It is known that the Egyptians were worshippers of the heavenly bodies, and that they deified many things in nature about them. They were also astronomers of no mean capacity, but whether they were meteorologists and had vanes for detecting the direction of the winds is not known.

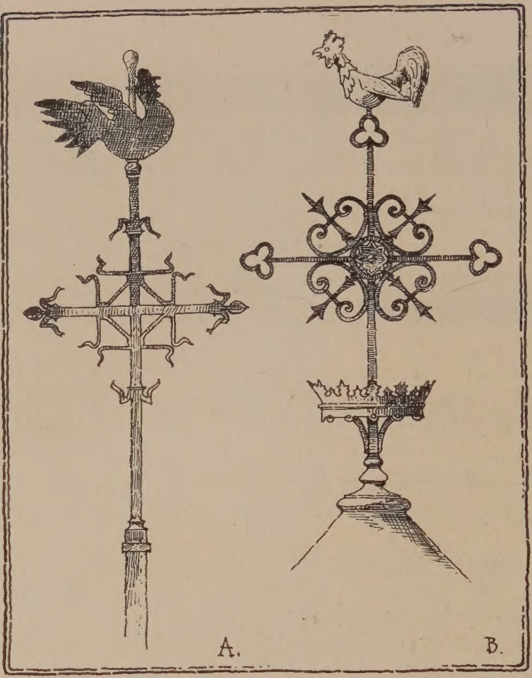
The Babylonians, Assyrians, and Persians are known to have built "holy mountains," or ziggurats, which were, in reality, observatories of a religious nature, but no accounts come down to us which would indicate the use of the vane.

The direction of the wind must have been of special importance to the early seafaring man, for he depended upon it to drive his crude ship over the water. Weathervanes, of some simple form, may have been set up in the port towns of the Phœnicians, Cretans, and other early seafaring peoples of the Mediterranean area.

The first meteorological observatory of which we have definite knowledge is the "Tower of Winds," at Athens, Greece. It was built by Andronicus of Cyrrhus, who flourished about 100 B. C. The purpose of the building was twofold: to tell the direction of the wind by means of a "brazen trident," which surmounted the conical roof of the octagonal structure, and also to tell the time of day by means of sun-dials, or by a clepsydra—a water clock—during inclement weather. Sufficient remains of this structure come down to us to permit the archæologist to restore it.

In this earliest known example the purpose of the trident, or vane, was evidently of a utilitarian nature in so far as it was a means of giving a visual indication of the direction from which the wind was blowing at any one moment. That there was also a symbolical meaning given to the vane and its use seems most probable, for it is known that the winds were deified by the Greeks, and in this instance, on the eight faces of the octagonal tower—in their upper part —were sculptured eight allegorical figures representing the mythological attributes of the winds from the eight points of the globe. The trident was adjusted on a pivot and carried a wand, which pointed to the figure below corresponding to the wind which was blowing at the moment. It is probable that some religious or mythological belief gave rise to the use of the vane, rather than any purely scientific aspect.

The Romans, who usually followed the Greeks, also made use of the vane. M. Terentius Varro (116–27 B. C.), a Roman polymath and man of letters, had on his farm, near Rome, a vane that could be read indoors by means of a dial. Varro had studied in Athens and, as his dates would indicate, had ample opportunity to learn of the work of Andronicus, and no doubt was personally acquainted with the Greek meteorologist. One Danti, at a little later time, erected vanes of a similar character in Bologna and Florence. The dials of his vanes were placed on the ceiling, and sometimes on the walls. A vane in the form of a triton is said to have stood on the Temple of Androgeus, at Rome. A remarkable monumental vane was built at Constantinople, during Roman times, in the form of a colossal column, on the outside of which were sculptured scenes depicting the seasons, and which was surmounted by a vane in the form of an heroic figure of a woman.



French vanes, of the "weathercock" type.
A. From a church near Calais.
B. A typical French weathercock, after Raguenet.

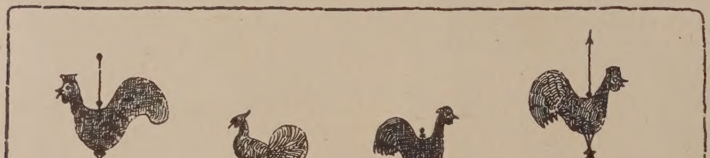
These elaborate vanes must have had simpler predecessors, and also many imitators, but ancient and classical writings contain very few references to them. Apparently it was a plaything of the scholar and embryo scientist of these early times. Alexandria, the great centre of learning, may have had vanes, as did Athens and Rome, although there are no available records. A few of this type were constructed during the mediæval period, the most noted of which is the Giralda of Seville, which takes its name from the vane at its summit—a female figure which shifts readily with the breeze. This "Giraldillo" is of bronze, thirteen feet high, weighs nearly 2,500 pounds, and is perhaps the largest vane in the world. It was cast in 1568 by Bartolome Mosel. This tower and its vane were the inspiration for the tower of Madison Square Garden with its "Diana." Figures of angels have also been used for vanes on churches. The one on the Cathedral in Berlin is said to weigh about 1,900 pounds.

During the mediæval period the vane was used more widely than at any time before or since. Whether the idea was carried from Greece and Rome into western Europe, or whether the idea was evolved anew, cannot be determined. It is certain that the purpose and meaning given it were different from those given during the earlier period. Two distinct types, each with a different meaning, seem to have come into common use: the "cock" type—generally called the weathercock—and the "banner" type. The former took on a meaning of Christian symbolism, while the latter became the symbol or badge of the nobility, especially in France and England.

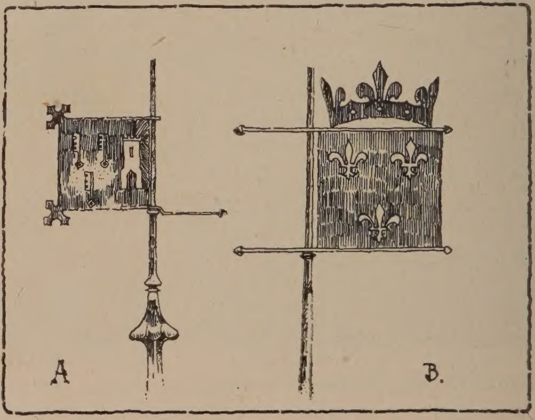
The weathercock, it is claimed, was in use as early as 820. There is a tradition that Bishop Rampertus had erected a vane of this form on a church at Brixen in the Tyrol. The origin of the "weathercock" form, however, is as obscure as the vane proper. It was used almost exclusively on ecclesiastical buildings for hundreds of years, and therefore must have had some special religious significance.

There are a few instances on record of the use of the weathercock on ships. A Norman fleet sent to England in 1013 is said to have had figures of birds or cocks on its masts "turning with the wind." The weathercock was known in England, however, before the Norman Conquest. A representation of one on St. Peter's Church, Westminster, is shown in the Bayeux Tapestry.

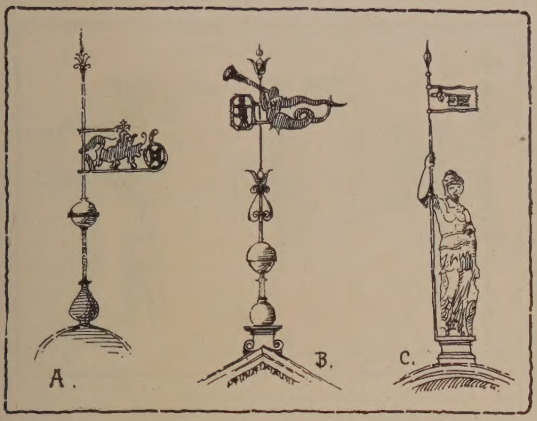
The usual arrangement of this type was a profile figure of flat metal, or occasionally of hollow metal, in the form of a cock in a crowing attitude, perhaps a symbol of warning in allusion to St. Peter and the crowing of the cock. Although arranged on a pivot or rod so that it would turn and thus indicate the direction of the wind, this was, however, a secondary matter and not the purpose of the device. This particular form has given rise to the common term "weathercock." This type seems to have been more common in England than in France or any other



English vanes, of the "weathercock" type.
A. From an old church in Lincolnshire.
B. Vane on an old church, near Guild Hall, London.
C. Typical church type of weathercock.
D. Typical weathercock-type vane, by Wren.



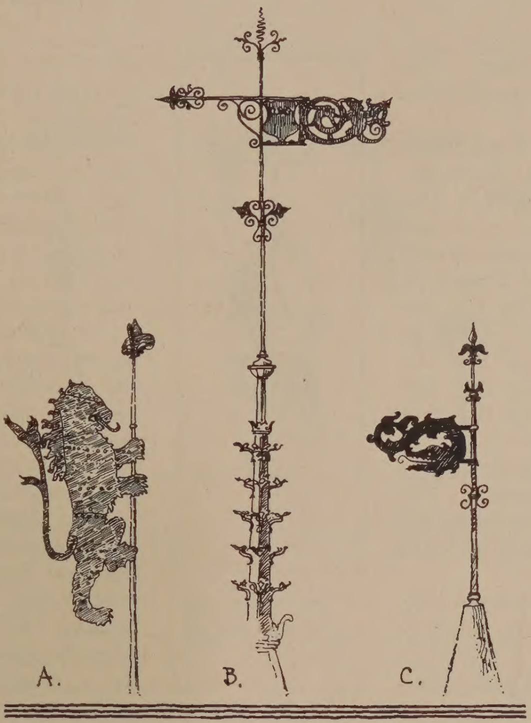
French heraldic-banner vanes.
A. Vane on hospital at Beaune. About 1440.
B. From Château Amboise. Early sixteenth century. After Viollet-le-Duc.



Typical German and Dutch heraldic vanes. After Ortwein.

country, but in spite of this fact there is very little literature extant concerning them. Most references are fragmentary. Evelyn, writing in the middle of the seventeenth century, when journeying in Kent, says that the weathercocks were "very numerous and placed not only on churches but also on farmhouses and barns." From that time on down through the Renaissance, and even in modern times, they have been in almost constant use in England.

In France and England the banner-type vane became the symbol or badge of the nobility. This was usually made in imitation of a flag or pendant, in which the flat metal part of the vane was, in reality, a metal flag upon which the coat-of-arms or other emblem of the nobleman was placed, either as a cut-out design or painted in colors, or both. Since the flag or pendant always unfurled in the direction of the wind, it was a logical thing to place the device on a rod or pivot so that it would turn.



Heraldic vanes, showing the use of symbolical animal forms.
A. Palazzo del Podesta, Florence, Italy. Fourteenth century.
B. Rathaus Halle, Cologne, Germany After Ortwein.
C. Mauburger Schloss, Germany, 1700. After Ortwein.

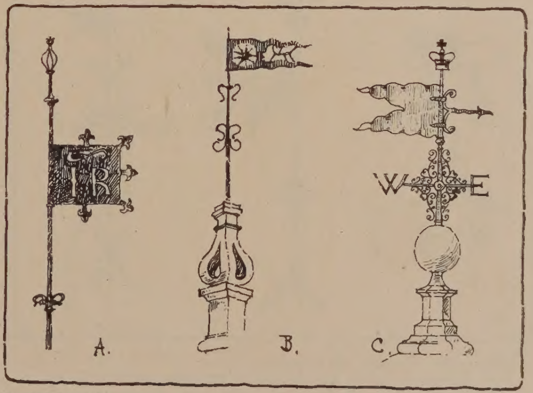
In mediæval times it appears that it became the custom to give the nobility the liberty of setting up vanes over their houses; some authors say that none could attain to that honor who had not been foremost at scaling the walls in an assault upon some city, or had first planted their banner or pendant on the ramparts. S. Palaye says, that "none but those who were nobly descended had the privilege of expressing on their flags, or of blazoning the achievements of their houses." Also, he says: "It is known that the first act of possession of a fief or domain, or a palace taken in war, was indicated by the banner of the new lord, placed on the most permanent place on the highest tower." "Gentlemen," says Lafourer, "have the sole right to have weathervanes on their houses; they are pointed like pennons for simple knights, and square like banners for knight's bannerette." Originally they seem to have been the exclusive prerogative of military leaders who had won distinction in battle.

The old hospital of Beaune had old vanes of its roofs painted with the arms of Nicholas Rollin, chancellor of Burgundy (1441). These vanes were square with a single counter-poise, and decorated in the corners by cut-out leaves. Many vanes of this style are to be found throughout France.

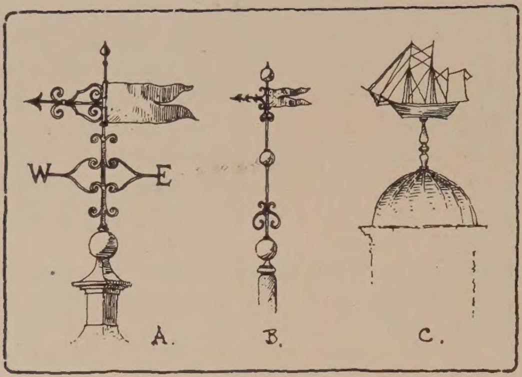
Heraldic vanes were also used by the royalty on their châteaux. These were distinguished by having a crown arranged above them. One of this character was placed on the Château of Amboise, in the sixteenth century, decorated with the arms of France, perforated and crowned. Many other forms of vanes were used in both mediæval and renaissance times in France.

English heraldic vanes passed through the same stages of development and use as those in France. Many forms were created, but most of the early ones were of the banner type. In the Tudor period the favorite design was a beast or bird sitting on a slender pedestal, and carrying an upright rod on which a thin plate of metal is hung like a flag, and ornamented in various ways.

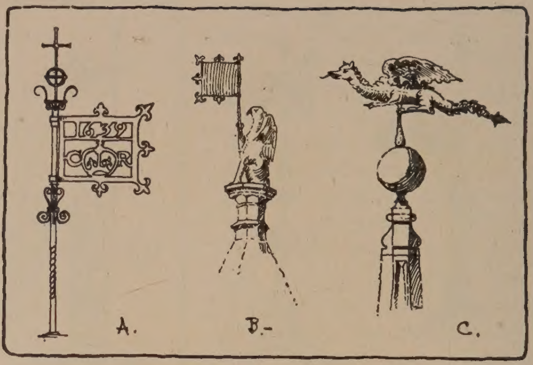
In both France and England the special privilege of the use of vanes passed out of existence long before the Renaissance, after which time they were used freely by all classes and on all styles of buildings. In England, especially, there was a great diversity of designs. In the *London Builder*, of 1855, there was published an authentic account, together with illustrations, of vanes then extant in London, which may be taken as the typical English types. Most of these had a symbolical aspect. The vane on the church of St. Clement Danes was ornamented with an anchor, the instrument of St. Clement's martyrdom. This particular saint is the patron of the blacksmiths and "cunning workers of iron." The vane of St. Mary-le-Bow was in the form of a dragon. That on St. Stephen's, in Wallbrook, was in the form of a gridiron, in allusion to the manner in which the patron saint was martyred. The same form was used on St. Lawrence, Jewry. The "ship," symbolical of the "church," was also a common form on London churches. It was used on St. Mildred, St. Olave, St. Bartholomew,



English heraldic vanes.
A. Barlborough Hall, London. After Garratt.
B. Blicking Hall, London.
C. An ornamental type.



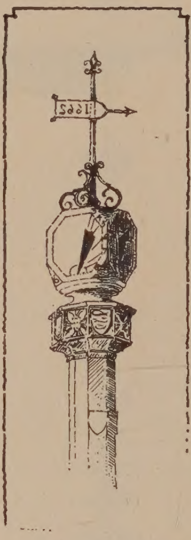
English vanes. Renaissance period.
A. Hedson Church.
B. Town Hall, Guilford.
C. Guildhall, Rochester.



English vanes, ornamental types, on English houses.
A. Parkwood House, Warwickshire. After Ditchfield.
B. Worthorpe, in Northants. After Twopenny.
C. From Woolhampton. After Exemplar of Architecture.

St. Paul in Dock Street, and St. Michael. The "key," in allusion to St. Peter, was another form used.

Vanes were frequently used in England on other than church structures. The Exchange, London, was adorned by a "grasshopper." The City of London Courts are surmounted by a vane in the form of the shield of the city and a sword. An interesting example of a vane and a sun-dial, built as a separate feature and recalling the idea of the Tower of the Winds, at Athens, is that at Peebles, Scotland, erected in 1665, which is in the form of a garden dial on a pedestal, and surmounted by a simple arrow-vane, with the date in cut-out figures.



A combination dial and vane, in Peebles, Scotland. Date, 1665. After McGibbon & Ross.

Vanes of various forms were widely used in Holland, Belgium, Germany, and Austria. The same purposes and the same meanings were attached to vanes in these countries as in France and England.

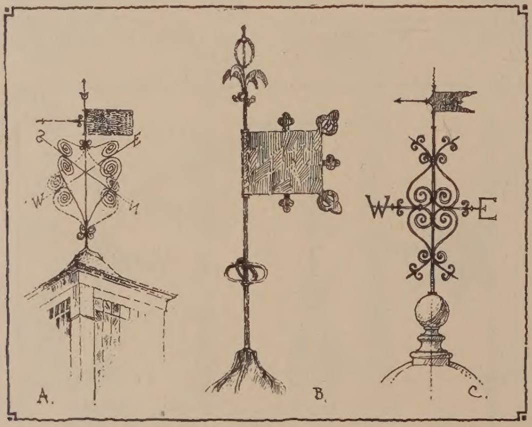
The idea of the vane was carried into our own country at an early date, and their use has persisted on down to the present time.

Here they were used on churches and public buildings. The "cock" type seems to have been the earliest introduced. The most famous of these are three that are said to have been made by a London coppersmith and brought to this country in 1750. One was placed on the spire of Old South Church, Boston, one on a church in Newburyport, and the third on First Church in Springfield.

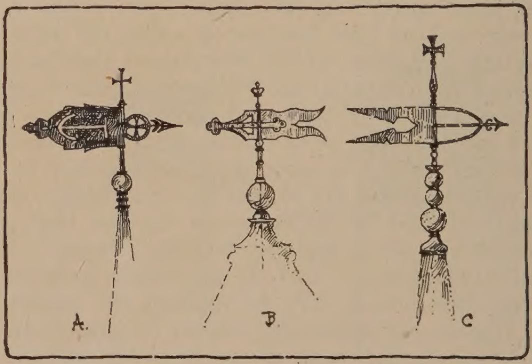
Simple pendant and arrow types were also very common, and were used on all types of buildings. Most of these were inspired by the Wren, Gibbs, and Hawksmoor types of England. Vanes of varied types were also widely used on public buildings in the United States, many of which still remain to-day.

It will be recalled that the chief purpose of the first definitely known vane, on the Tower of the Winds, was to detect and indicate the direction of the winds, and it is interesting to observe that perhaps the widest use made of vanes to-day in this country is as a scientific meteorological instrument for detecting and recording graphically the direction of the winds at every moment throughout the day. Like the practical Roman, we place the vane on high and read it not by observing its position, but by reading the dial inside of the building. The scientific vane used by the U. S. Weather Bureau has a spread tail, the purpose of which is to prevent oscillation and to hold the vane in correct position.

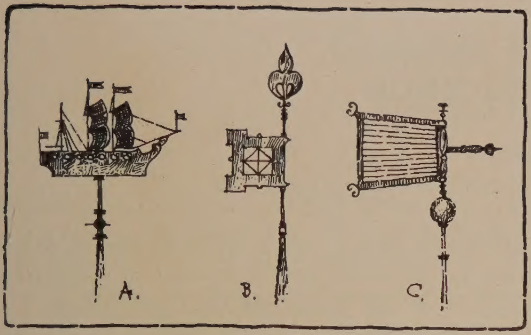
Although an ancient device, the vane still serves a modern useful purpose, and also as an ornamental architectural feature. It is encouraging to observe the present tendency to revive the use of the vane, and especially to take advan-



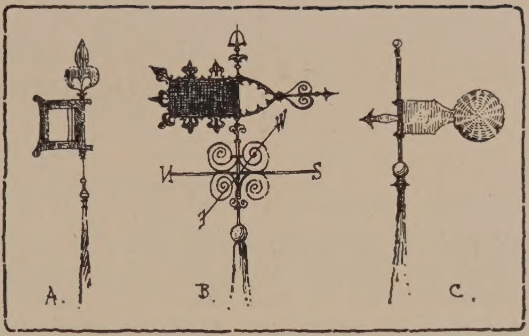
English vanes. Heraldic and symbolical types.
A. Ruscourt Church, near Reading. After Garner.
B. Stanton Harcourt, Oxon. A typical vane of the Tudor period. After Garner.
C. Bow Street Church, London. After Wren.



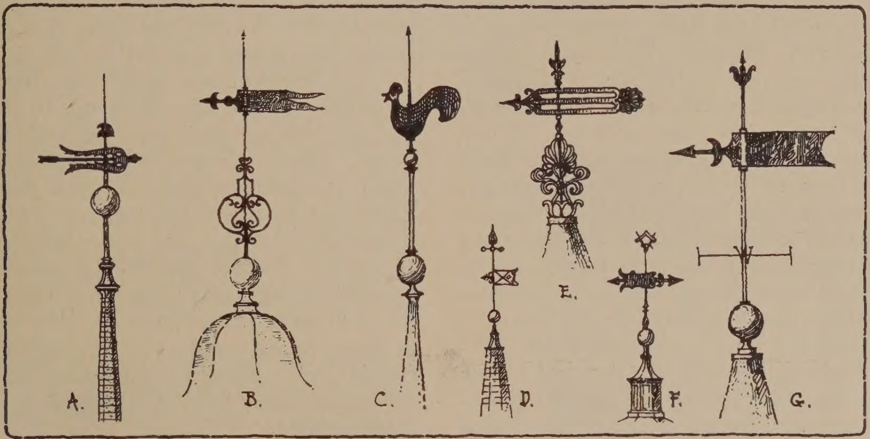
English vanes of the modified banner type.
A. Common type of the Renaissance period. St. Clement Danes, London.
B. From Greenwich Hospital.
C. From one of Wren's London churches. After the builder (London).



English vanes, depicting symbolism.
A. St. Mildred's Church, London.
B. From the Parliament buildings.
C. St. Stephen's Church, Wallbrook. After the builder (London).



English vanes, in London.
A. From the Parliament buildings.
B. Old south transept, Westminster Abbey.
C. St. Mary-le-Strand. After the builder



American vanes of various types.
A. From Independence Hall, Philadelphia.
B. Old Pennsylvania Hospital, Philadelphia.
C. Old Congregational Church, Deerfield, Mass.
D. From Christ Church, Philadelphia.
E. Greek revival vane, after Asher Benjamin.
F. From Carpenters' Hall, Philadelphia.
G. From Old Swedes' Church, Philadelphia.

tage of its decorative possibilities. It offers a tempting field to the craftsman. Vanes in general deserve more attention from modern architects and artisans than they have received. Through long usage they have acquired well-defined meanings and historical associations which should be known to the designer in order to use them appropriately. Old forms should not be given new meanings, but should serve only as inspiration and guidance to the designer and craftsman in creating new forms with new meanings which will be expressive of our own time.

From Old Dutch Church, State Street, Albany, N. Y

Vocations and Education

By Gerhardt F. Meyne

Extracts from an Address before the National Vocational Educational Society at Indianapolis

THE problem before the builder and industrialist is: "How can vocations and education be most practically combined?" as the great majority of people must labor at something productive. Educated people without a desire for labor can be an insufferable evil.

Within the memory of most of us, the three R's were considered to be the ample system. Half of our citizens have been educated within them. The three R's of to-day represent a whole lot more in study and education than formerly. There are but few in the United States who cannot read and write fluently. Many, in their more mature years, have acquired the love for the literary arts, understand the plays and the classics, but the growth of our educational system has all been in the same direction. There is practically no difference in the instruction given to those who are ambitious to become lawyers, doctors, engineers, architects, and other professional men, and the instruction given those who are neither leaning, inclined, nor ambitious toward the professions, who neither have the means, desire, ability, nor endowments to enter the professions, but are content to earn an honorable living at a trade or vocation.

Yet most of the education, after the seventh grade, is directed toward the professions. Ninety-two per cent of our youths do not get to college, approximately 5 per cent graduate. Let us look at the somewhat archaic and chaotic system of preparing the 92 per cent's lifetime in a practical manner.

In most of our States our youths are not permitted to go to work at the building trades until they are sixteen years of age. What are we doing for these youngsters, and how are we utilizing their lifetime for the benefit of themselves, the public, and the future employer? It should not be necessary for the young man who desires to become a building tradesman to be required to burden himself with many of the subjects now taught, and in which he has no interest whatsoever. He should not be required to study the same general subjects as the youth who has a leaning or ambition for the professions.

The general tendency in the high schools, as I know them, is to encourage students to become members of the professions—the average high-school instructor, academician, encourages them unduly toward the professions. For some unaccountable reason the academician and the American parent seem to think that the professional class and semiprofessional class, such as clerks, salesmen, draftsmen, etc., are considered to possess greater gentility, and they are looked upon by the present and past generation as something superior to the mechanic. Could these good people but see the numerous opportunities that are constantly presented to the vocationally trained man who knows his trade fundamentals, and could they but know of his yearly income, they would view him in appreciation instead of depreciation. The vocationally trained man can take advantage of these numerous opportunities by continuing his education in night courses, short-term college courses, etc. He cannot only aspire to the heights in industry, but, what is more, if he applies his endowments, training, and ability, he can actually "arrive."

The lifetime of our youths could be turned to greater advantage to the nation and to themselves if the educator would take advantage of utilizing the years that are so often dribbled away because of lack of interest in the subjects taught. There are 2,000,000 of our young, between the ages of 5 years and 20 years, in our schools. Of these 2,000,000, 92 per cent leave schools between the ages of 13 and 20 to go into some industrial, commercial, or agricultural pursuit. What are we, the public, and you educators doing to prepare them for this new thing that they are facing? The egress from school is about as follows:

One hundred and twenty-five thousand, or 6 per cent, leave between the ages of 13 and 14 years; another 125,000, or another 6 per cent, leave between the ages of 14 and 15 years. When we come to the ages of 15 and 16, the figures jump considerably, and show that 400,000, or 20 per cent, leave your school for one reason or another. Three hundred thousand, or 15 per cent, leave between the ages of 16 and 17 years. Another 400,000, or another 20 per cent, leave between the ages of 17 and 18—all of these to engage themselves in some life occupation. Are we doing everything to fit these young people with an understanding of what confronts them? Have we developed their capabilities to shift for themselves? For, in biological terms, we may consider them weaned.

Now we come to the college age, and find that only a small percentage are left to enter college. Youths are leaving college at the rate of 100,000 to 200,000 each year, and only a very small percentage—approximately only 5 per cent—graduate. Yet the entire curriculum, in most instances, from the ages of 13 to 20, has been set and made up for the purpose of entering the youths into college. I ask again, have we utilized the lifetime at our disposal efficiently?

Personally, I believe the old "indenture system" has outlived its usefulness. It is no longer necessary for the master to provide shelter, food, and clothing for the boy. It is no longer necessary to teach him to read and to write, as usually was his obligation. He now pays him the wage he is able to earn. The parents and school usually provide the other.

I hope to see that the public schools of to-day will be the vehicle of training the industrial arts as were the mediæval monasteries of the eighth and ninth centuries. We know that it was usually a willing exchange of manual labor for protection, teaching, and subsistence, either within the monasteries or to those who lived near them. Those who would gain knowledge were obliged to give their labor free in exchange for learning, protection, and living, creating practically a condition of servitude. This condition no longer exists.

The thinking builder and industrialist is no longer vying for the freedom of labor, but for the dignity of labor, and general industrial freedom, and I believe that the time is here where the public school is taking the place of the old monastery, the time of servitude is past, the time of the old practice of indenture is slowly passing. Especially is this true in the building industry.

Garden Club Competition

Miniature Suburban Planting Exhibits

Classes I, II, III

THESE most attractive models of miniature gardens were shown in competition under the auspices of the Garden Club of America at the Twelfth Annual International Flower Show, New York.

In determining the conditions for the competition, it was assumed that the lots on which the houses are to be built are situated in an ideal community, where no one would plan any structure in such a way as to be detrimental to his neighbor. No restrictions of any kind have therefore been placed on the property. The house, as well as the garage, may be placed on any property line, or on the street, at the discretion of the exhibitor.

In determining the location and arrangement of the house and garage, the exhibitor must first decide the conformation of the ground, whether sloping or level, also the orientation. In this connection, it may be pointed out that the most interesting solutions may often be obtained under adverse conditions of slope and orientation. In any case, where the house and garage are placed on a property line, due consideration should be shown for the interests of all neighbors. Suitable decorative treatments for walls and gable ends so placed may be indicated at the option of the exhibitor.

The location and arrangement of windows and chimneys will be determined by the location and orientation of the house, and by the ground plan so arrived at. Their detail is left to the taste and judgment of the individual exhibitor.

Two types of models are provided—Colonial and English.

Note.—Concerning the English model: It is necessary to point out that the eaves should be placed at the human eye line for an individual standing on the second floor. Second floor windows must, therefore, be placed in gables, or in swellings in the cornice line. These dormers should be placed in such a position on the roof that the face of the dormer will be flush with the face of the wall below, and the eaves should be cut away in front of the dormer at whatever position the exhibitor desires to place them. The portion of the eaves to be cut away is the exact dimension of the base of the dormer. The window will then be painted with its head coming up into the triangular face of the dormer. In other words, when the dormer has been placed and the eaves cut away, the wall of the house will appear to run straight up to the peak of the dormer, and the window should be above the line of the eaves of the dormer.

Exhibitors are allowed to raise or lower the cornice line of the houses, also allowed to take off the roof of the garage, making it flat or otherwise.

Concerning the Colonial model: Chimneys may be made square and wing may be lowered. Dormers are intended for the wing and not for the main house.

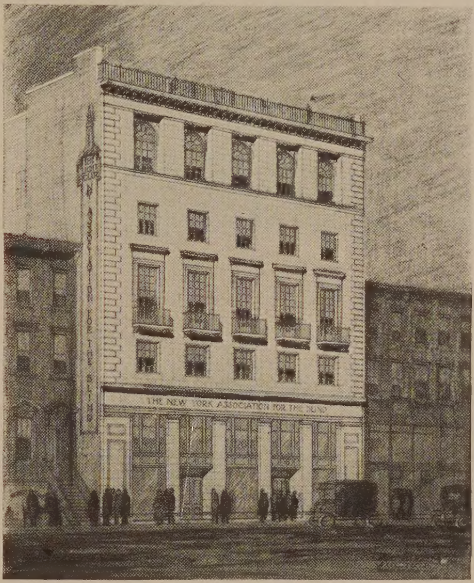
More Light for the Blind

THE expansion of the work carried on by the New York Association for the Blind necessitates increased room space. The present five-story structure has proved inadequate for the many activities housed in the building erected in 1912.

The architects for the new addition are the firm of Hunt & Hunt. This addition was among the last pieces of work created by the late Joseph Howland Hunt before his death last autumn. Richard Hunt is carrying out his brother's plan.

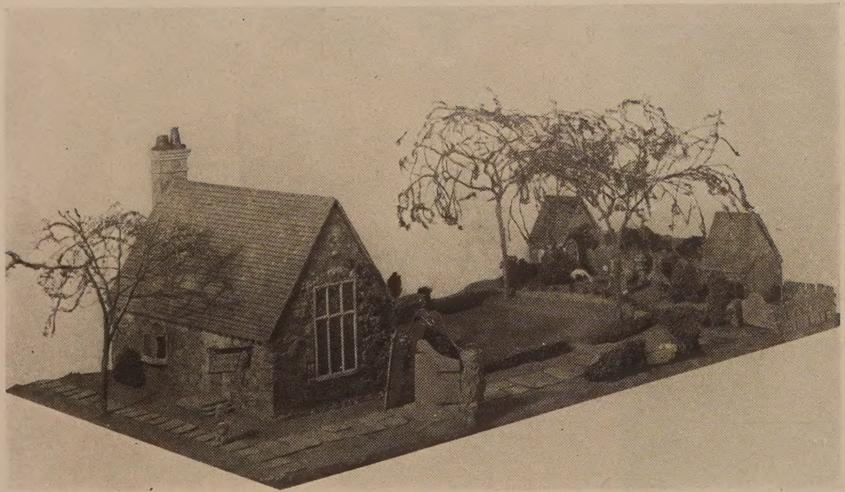
The architectural plans extend the façade of the Lighthouse to take in the new wing. Limestone is to be used in the front of the house with a brick construction for the remaining part of the building.

The new wing, its equipment and maintenance are to cost $250,000. This sum is being raised by a committee headed by Thomas S. McLane, treasurer of the New York Association for the Blind. Those pledged to raise the $250,000 consist of Dr. John H. Finley, Judge Henry W. Goddard, Felix M. Warburg, Charles E. Hughes, Jr., and Nathaniel A. Elsberg. Seth E. Thomas is chairman of the new building committee, with Nelson C. Holland and Thomas S. McLane as his associates.

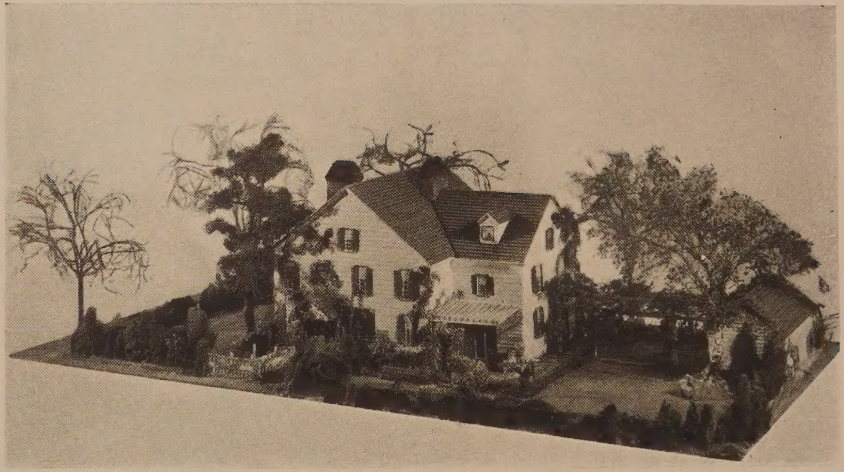

THE NEW YORK ASSOCIATION FOR THE BLIND

The New Façade of the Lighthouse of the New York Association for the Blind.
Hunt & Hunt, Architects.

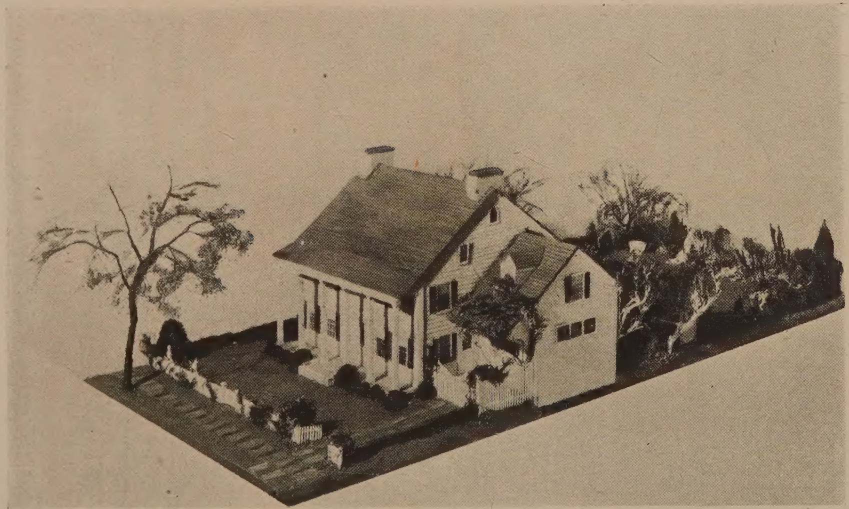
The Lighthouse was founded in 1906 by Mrs. Rufus Graves Mather, then Winifred Holt, daughter of the famous publisher. She started the work in her private residence in East 78th Street. Later Mrs. Russell Sage paid the rent of a house in East 59th Street, where the work was carried on for five years. The present structure was erected in 1912, and the ceremonies of dedication were conducted by Chief Justice William Howard Taft, then president of the United States. He and Secretary of State Charles Evans Hughes are still vice-presidents of the organization. Honorable Elihu Root is the honorary president, Miss Helen Keller is the woman vice-president of the association.



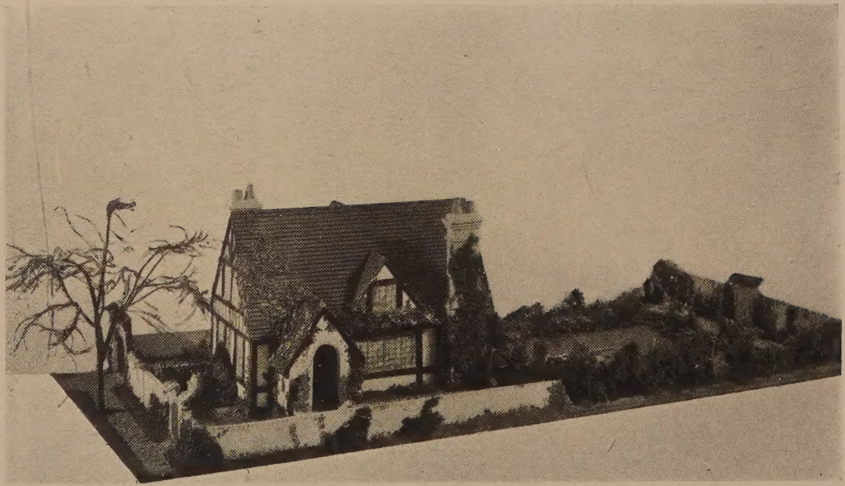
First Prize.—Model 5. Class 2. Library. By Mrs. Robert C. Hill.



Model 1. Class 2. Community block. By Mrs. Wm. H. Cary.

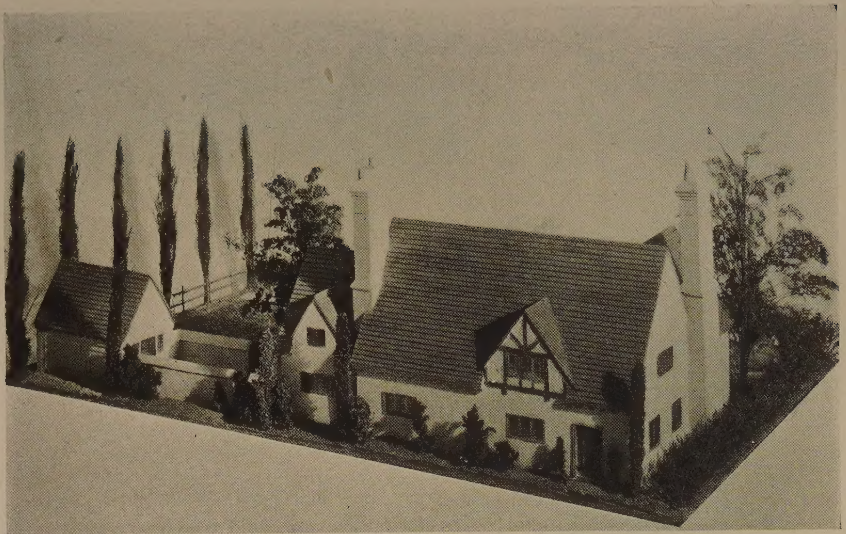


Second Prize.—Model 8. Class 2. Community block. By Mrs. Wm. A. Lockwood.

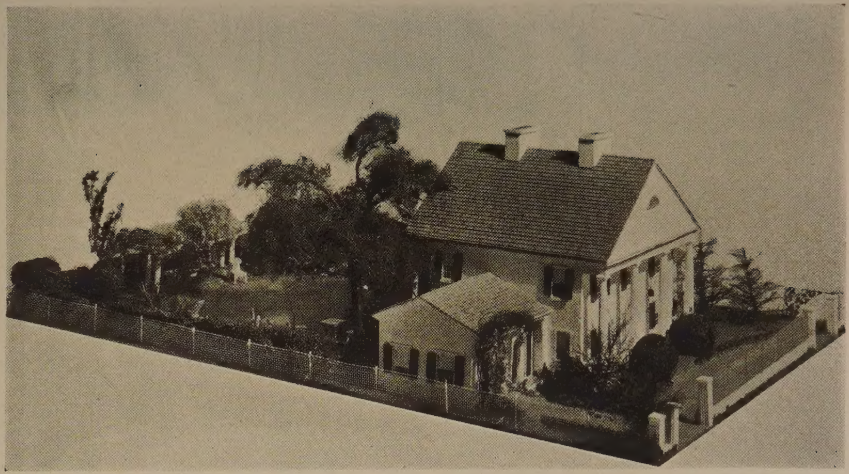


Model 9. Class 2. Community block. By Mrs. Wm. M. M———.

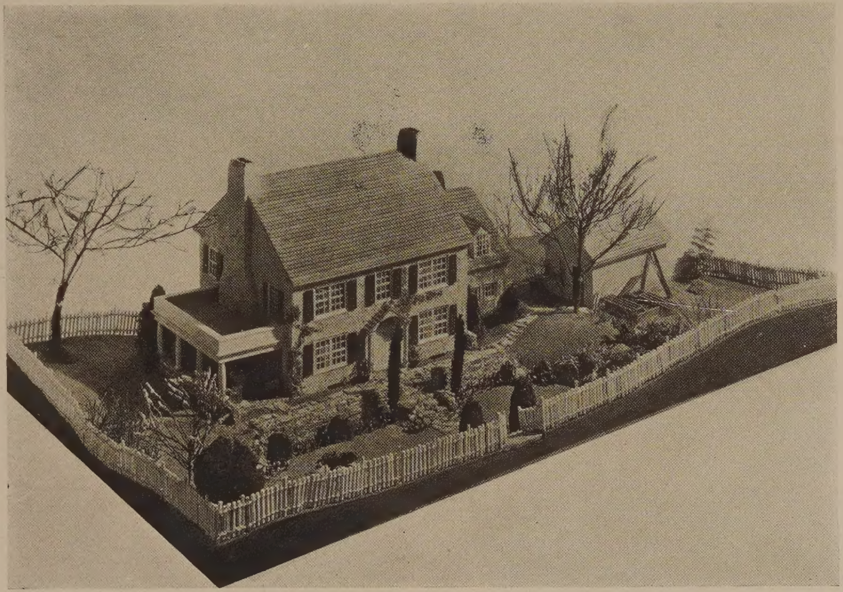
GARDEN CLUB COMPETITION, TWELFTH ANNUAL INTERNATIONAL FLOWER-SHOW.



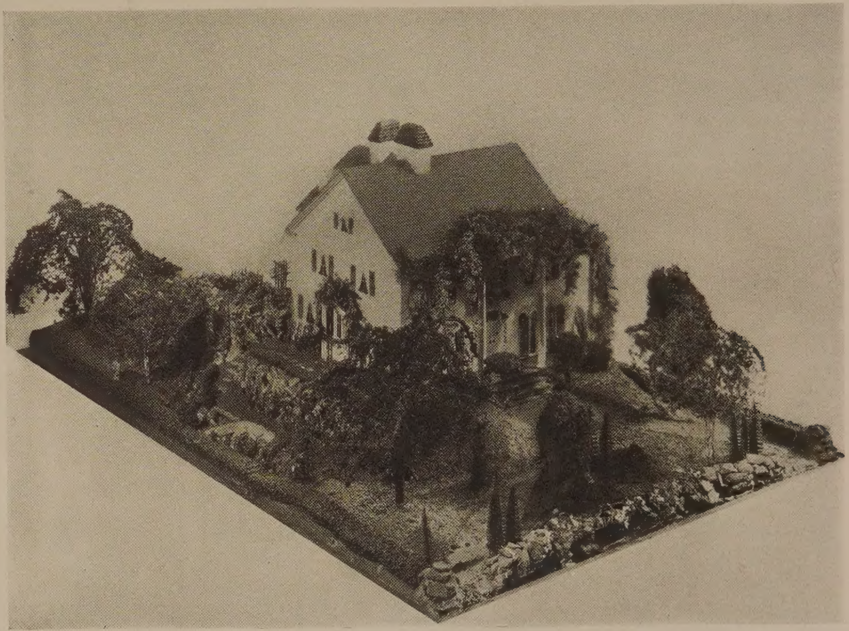
Third Prize.—Model 21. Class 3. Community block. By Mrs. Fitz Eugene Newbold.



"*Delineator*" *Gold Medal.*—Model 9. Class 3. By Mrs. Wm. H. Hencken.

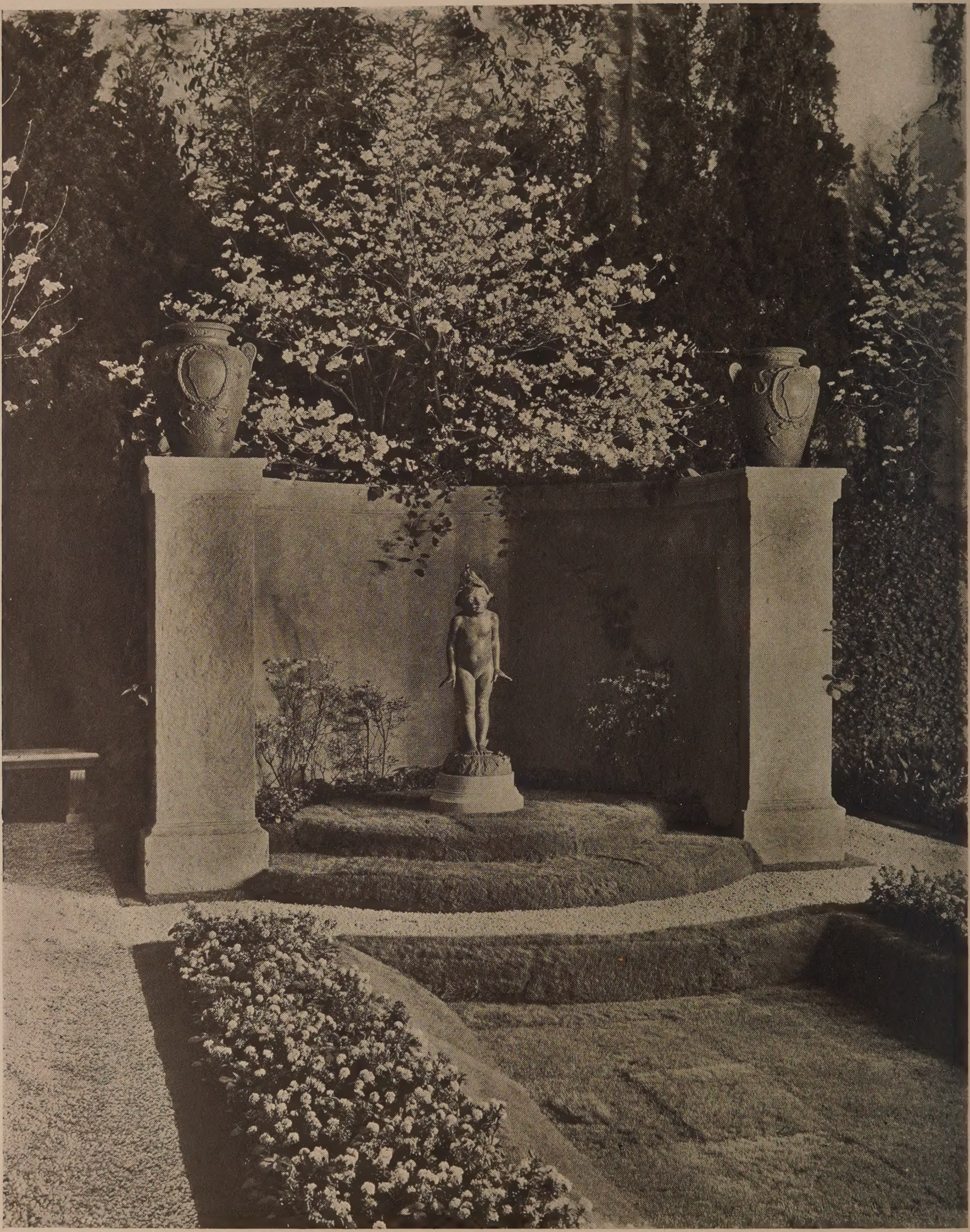


Honorable Mention.—Model 17. Class 3. By Mrs. R. Rauch and Mrs. Edw. C. Page.



Model 14. Class 3. By Miss Blanche Sackett.

GARDEN CLUB COMPETITION, TWELFTH ANNUAL INTERNATIONAL FLOWER-SHOW.



EXHIBIT, F. R. PIERSON CO. Dwight James Baum, Architect.

TWELFTH ANNUAL INTERNATIONAL FLOWER SHOW.

ARCHITECTVRE*
Published by Charles Scribner's Sons
THE PROFESSIONAL ARCHITECTVRAL MONTHLY
*Reg. U. S. Pat. Office

Editorial and Other Comment

The Greatest Architectural Exposition

WE have been following for a good many years the annual exhibitions of the Architectural League, and attending the conventions of the American Institute of Architects, and we think of these occasions as important events in our educational progress.

We have always felt that the League shows belonged especially to the public, the architects providing the show, and be it said always an interesting one, worthy of much more serious and popular attention than they have ever received. In New York, where there are so many exhibitions of all kinds constantly on tap, only those that make a noise or appeal to the sensational and unusual are apt to receive more than the passing notice of the few. The automobile show draws thousands, and the scene is one of much turmoil and sporty discussion. The work of a great Spanish painter, exploited with shrewd publicity and skilful play upon the social prestige of some of the personalities made manifest by his art, packs the house. The Spring Exhibition of the National Academy, the one hundredth Annual Exhibition, where our native art is supposed to put its best foot forward, and where, indeed, there are many things of high quality and deserving of a wide public appreciation, has but a modest record of attendance.

There is nothing in the world more interesting to the human family than the building and the owning of a home, and in the great show of Architecture and the Allied Arts at the Grand Central Palace there were thousands of seekers after the design and plan of the long-dreamed-of ideal house.

The show was not merely one for the knowing, for the student of blue-prints and architectural technicalities, but especially as a means of bringing together the public and the architect, to afford a very practical demonstration of the fact that the architect is not a luxury but a necessity, if you are to build with intelligence, expert knowledge of materials, avoidance of shoddy, and, above all, with economy and durability.

The chapters of the American Institute from all over the country sent special exhibits, affording an excellent opportunity of studying and comparing various types of regional architecture. It was like taking an architectural pilgrimage, a journey into other sections of our country, where climate and special building conditions have developed new and distinctive architectural styles.

Through the efforts of the Architectural League there were exhibits from many European countries. Among the English exhibits were the original drawings by Sir Gilbert Scott, R.A., of the great Liverpool Cathedral, and drawings by Sir Edwin Landseer Lutyens, who has been honored with the gold medal of the Institute, and the work of other leaders in modern English work.

The landscape architects were in evidence, and the sculptors, mural painters, and decorators sent of their best.

The manufacturers of building materials had a most interesting and instructive exhibit, as also the makers of the most approved and up-to-date equipment.

Important events during the exposition were the meeting of the Institute, the International Conference on City Planning, and the first showing of the official drawings of the Russell Sage Foundation for a Regional Planning of New York and Environs.

There were memorial exhibitions of work by Henry Bacon, Bertram Grosvenor Goodhue, Louis Sullivan, Arnold Brunner, and Willis Polk, whose deaths have been so recently and regretfully recorded.

To Mr. Harvey W. Corbett, President of the Architectural League, Mr. D. Everett Waid, President of the American Institute of Architects, to Mr. Howard Greenley, to whose fine taste and special knowledge we owe the transformation of the Grand Central Palace into a great art centre, and to the other gentlemen identified with this greatest architectural exposition we acknowledge a debt of gratitude and thanks. It has proved, in every way, one of the most instructive and beneficial expositions ever held in New York.

The jury of selection included the following well-known authorities in their special lines of work: Charles Keck, Robert I. Aitken, Chester Beach, Salvatore Bilotti, Attilio Piccirilli, and A. A. Weinman on sculpture; Fred Dana Marsh, D. Putnam Brinley, Arthur Covey, J. Monroe Hewlett, J. Mortimer Lichtenauer, and Ezra Winter on decorative painting; Professor Hubbard, of Harvard; Professor Wheeling, of Pennsylvania; Noel Chamberlain and Alfred Geiffert, Jr., on landscape architecture; Leon L. Gillette, William Adams Delano, Frederick G. Frost, Frederick H. Godley, and H. Van Buren Magonigle on architecture.

In a later number it will be our pleasure to give a more detailed report, and to include a number of the exhibits in our illustrations.

For the Foundations

WE recently received a circular letter from a well-known firm of engineers that began with the following four words: "Character, Ability, Experience, Imagination." The letter goes on to say: "On character depends the integrity of the contract; on ability, experience and imagination the value of the plant designed for you."

Reads like a tract for the times, a preachment in the market-place, but we need to be reminded, now and then, that the things that really count in success and progress are a regard for these old-fashioned qualities that this circular letter emphasizes.

A business organization founded on these four essentials is one we naturally turn to when we are looking around for some one to build a home, the million-dollar office, factory, or apartment-house.

And we like to believe that there are few professions in which these virtues function with greater regularity than in that of architecture. No one can be familiar with the high standards of professional conduct called for by the American Institute of Architects and not feel that here is an institution that has a salutary moral influence on the general practice of an honored profession.

It is well to put character first, for without this as a corner-stone, ability, experience, and imagination may become as naught. You want the man you can trust, on whose integrity you can bank with a certainty of getting value received. There is a lot of specious, smart, publicity-efficiency stuff spread about the world these days, but we think that, sooner or later, the real things are discovered and have the indorsement and support of those who, in the long run, make for sustained and substantial business success. Good old bunk and tall words may go with the sideshows and ballyhoo realtors, but in "our business" of architecture, and the things that contribute to the real welfare of the building industry, a few faltering words of candid truth are worth a dictionary of colorful adjectives.

The trouble with much publicity literature is that it is lacking in facts, claims that can be substantiated by indisputable evidence.

We have kept our circular letter on the desk for some days. It is the kind of business letter that inspires confidence by its frank statement of principles at the beginning. We like such letters, and we like men who start building friendly business relations on such foundations.

Fountain in the garden on the estate of William G. Mather, Cleveland, Ohio.
Charles A. Platt, Architect.
Exhibition New York Chapter of Landscape Architects.

The Appeal of Growing Things

A HOUSE without a garden, or at least some suitable planting to relieve the bareness of the landscape environment, no matter how attractive the house may be, lacks the feeling of intimacy and seasoning that we like to associate with the place we may call home.

The charm of many old places that have been neglected and fallen into decay still exists in the survival of old shrubs and trees that speak of human interest and a love of the things that contributed a note of beauty and a certain friendliness for growing things.

The little country house that is surrounded by graceful and well-placed planting is something that appeals to the eye and as well to the sense of fitness, for, somehow, plants in the shape of trees or shrubs seem to be a vital part of every habitation that shelters humans.

The art of well placed and considered planting has become one to engage the talents and special study of a number of clever men and women who have helped to beautify and give natural charm to hundreds of places large and small in the suburbs and real country.

We are showing in this number a group of the most attractive little miniature planting schemes recently exhibited under the auspices of The Garden Club of America, together with a number of garden designs recently seen at the Arden Gallery, illustrating the work by members of the New York Chapter of Landscape Architects.

We feel that these exhibits will be especially appropriate at this time, and that they make a feature that will have a wide appeal.

The Meeting of the Philadelphia Chapter, A. I. A.,

Held in Benjamin Franklin Hotel, March 25, 1925

Mr. Cret Says Commercialism Is Lowering Our Standards

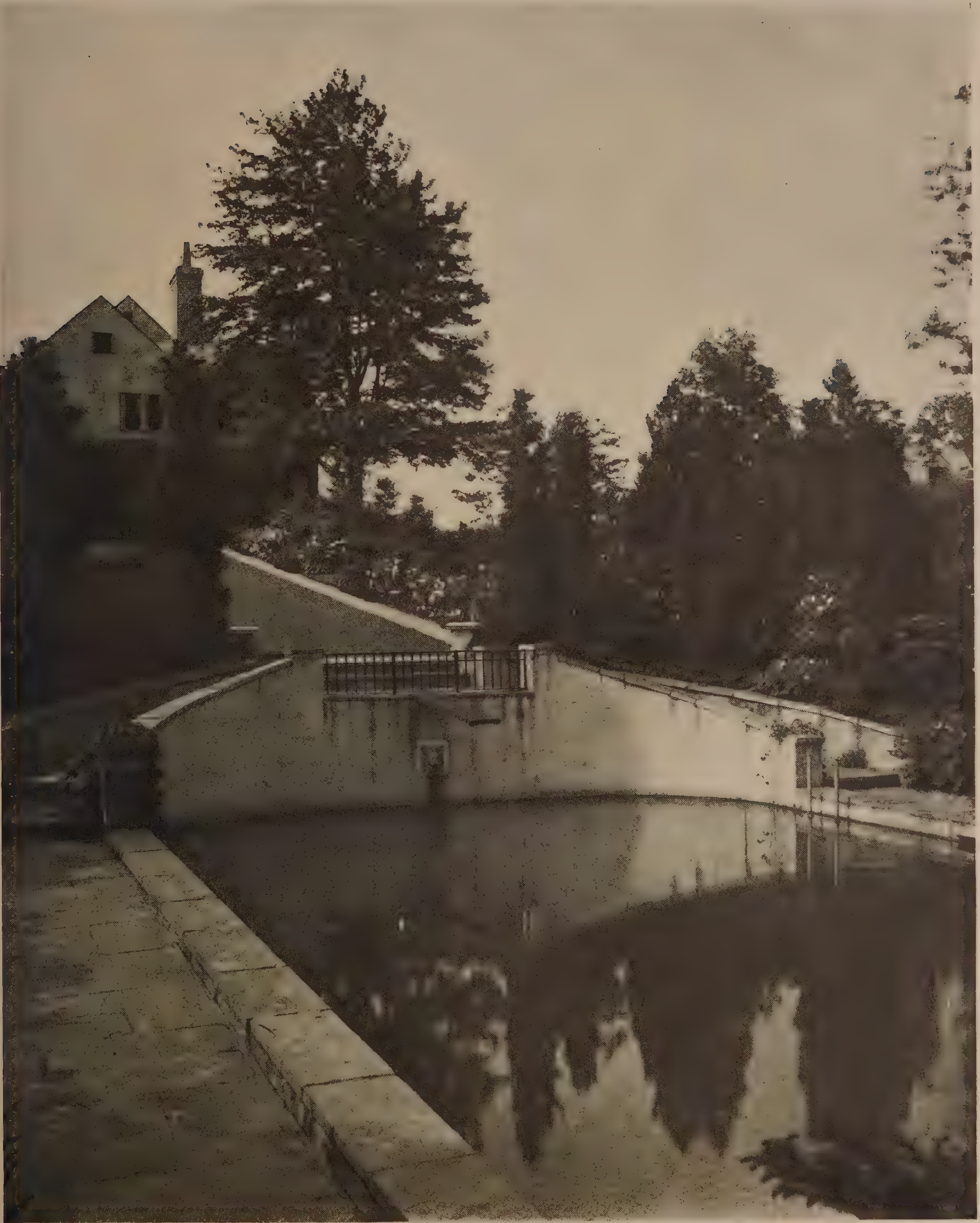
NEARLY sixty members of the Philadelphia Chapter met in the new Benjamin Franklin Hotel before 5.30 o'clock, and, through the courtesy of the management, made an examination of the building. After dinner together, the business of the meeting was proceeded with, President Paul A. Davis in the chair.

Doctor Paul P. Cret presented a paper on "The Trend of Modern Architecture." He said that modern architecture is influenced by commercialism, which demands speed of erection and cheapness. "Modern methods," according to Doctor Cret, are causing decay in craftsmanship among artisans, among contractors, and among architects.

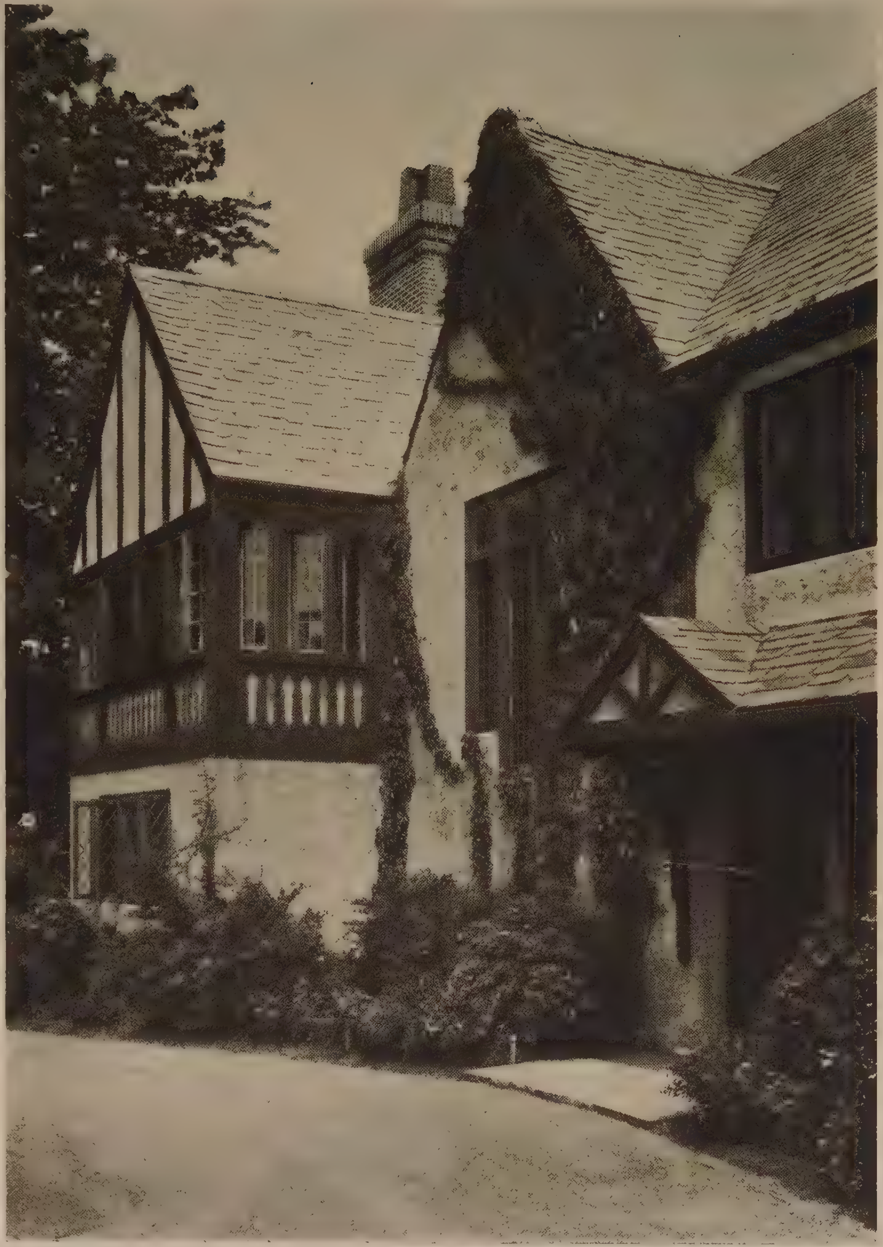
Another influence on modern architecture, he said, is the attempt to adapt new materials to forms traditionally used for other and different materials. The future, according to Doctor Cret, will probably cast aside these old forms and develop new ones more suitable to the material.

After simplifying craftsmanship in building, Doctor Cret expects that more possibilities than have been seen so far will be developed from the modern system of structural construction, and does not believe the forms of beauty are exhausted.

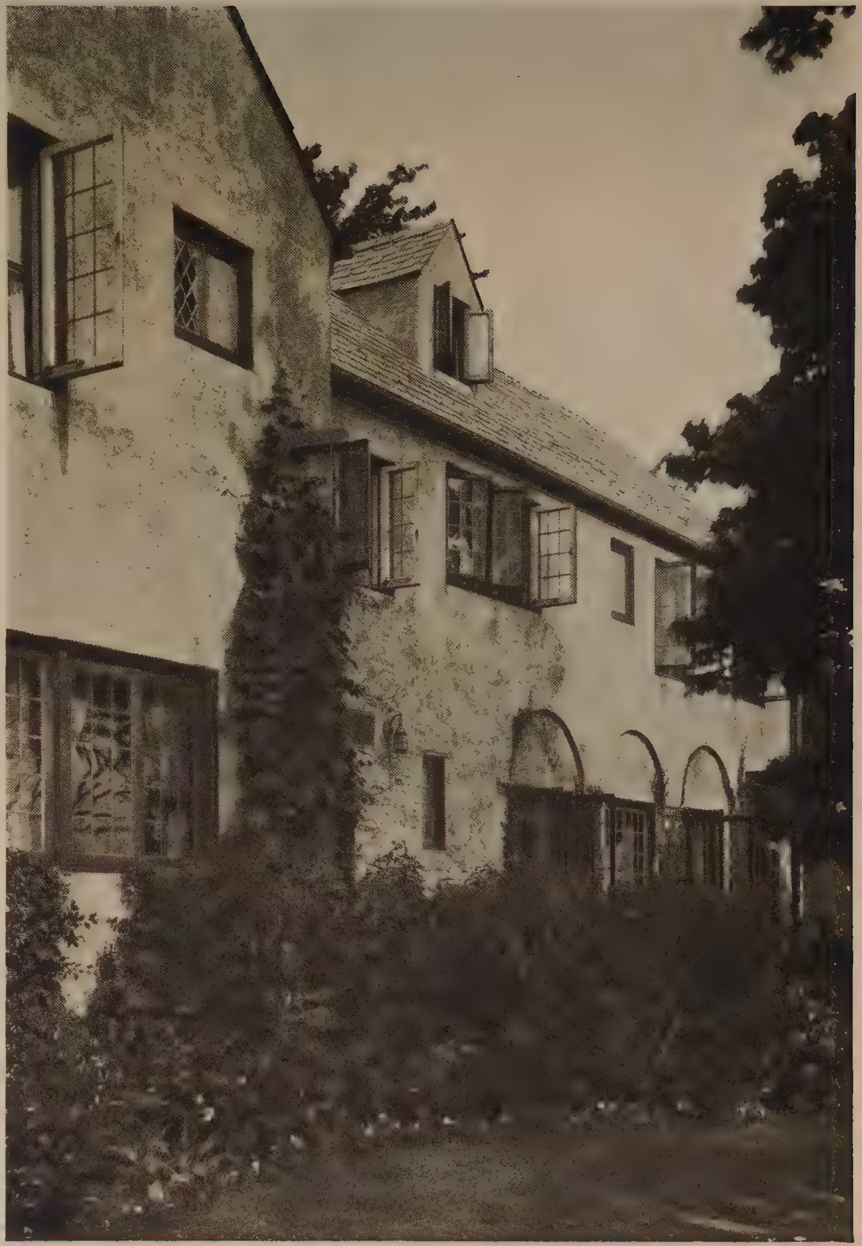
Prepared discussion was presented by Arthur I. Meigs, Leicester B. Holland, and William Pope Barney, each of whom was alternately brilliant, cynical, and prophetic, with a decided tinge of pessimism. Various points of view, including optimistic notes, were then presented by George Howe, Albert Kelsey, Clarence C. Zantzinger, Robert R. MacGoodwin, and by D. Knickerbocker Boyd, chairman Committee on Public Information.



SWIMMING-POOL, RESIDENCE, JAMES R. THOMAS, CHARLESTON, W. VA. Dennison & Hirons, Architects.



WEST ELEVATION.



EAST ELEVATION.

Dennison & Hirons, Architects.

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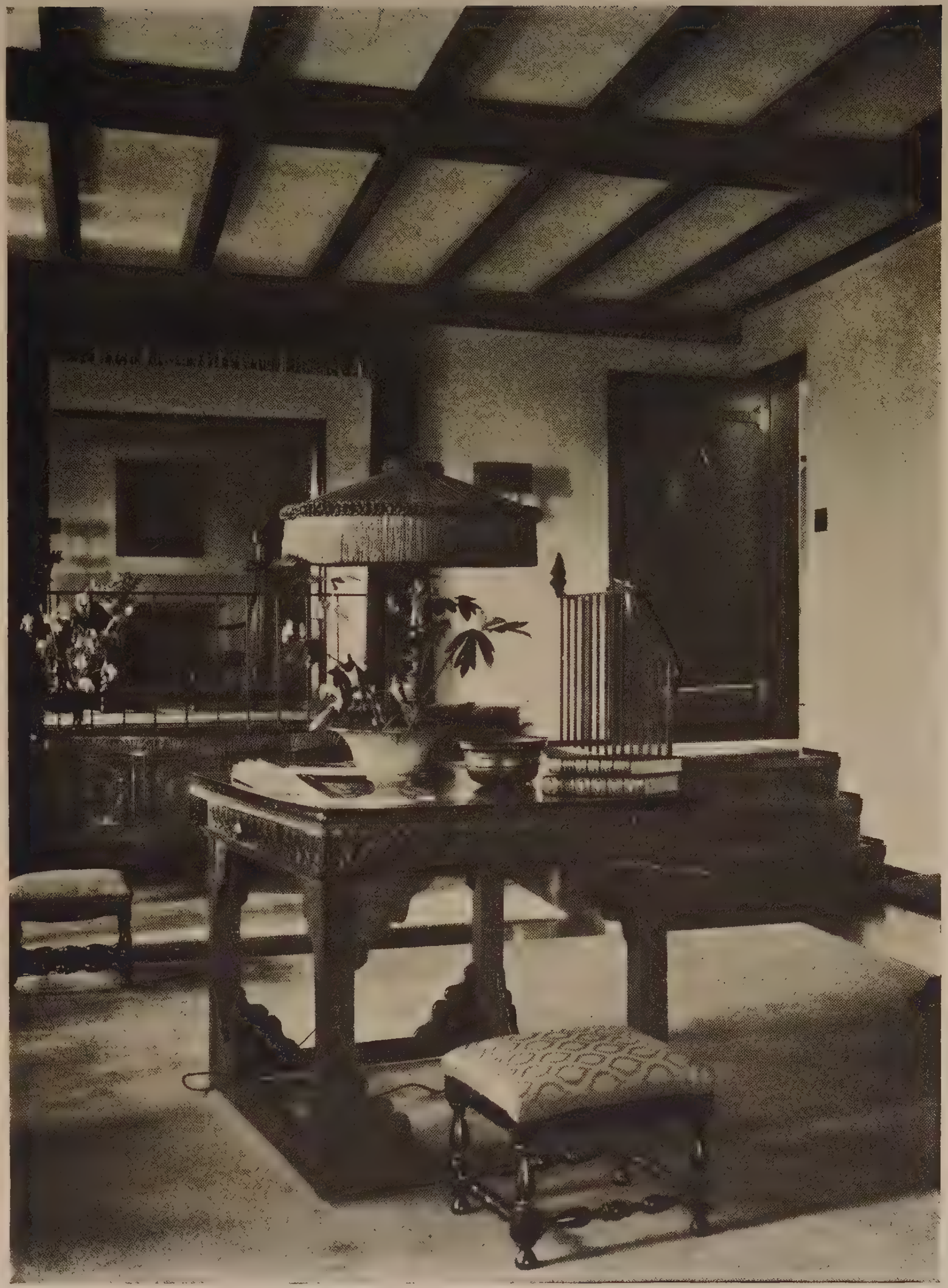

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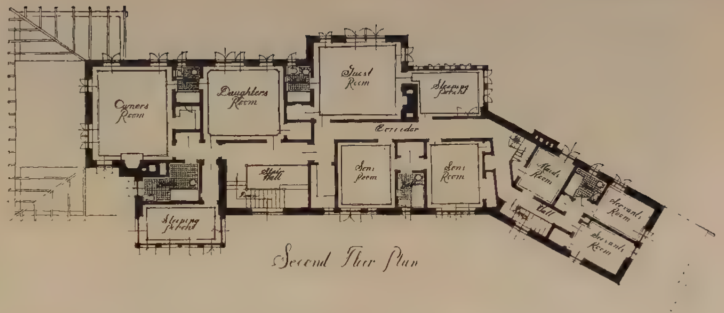

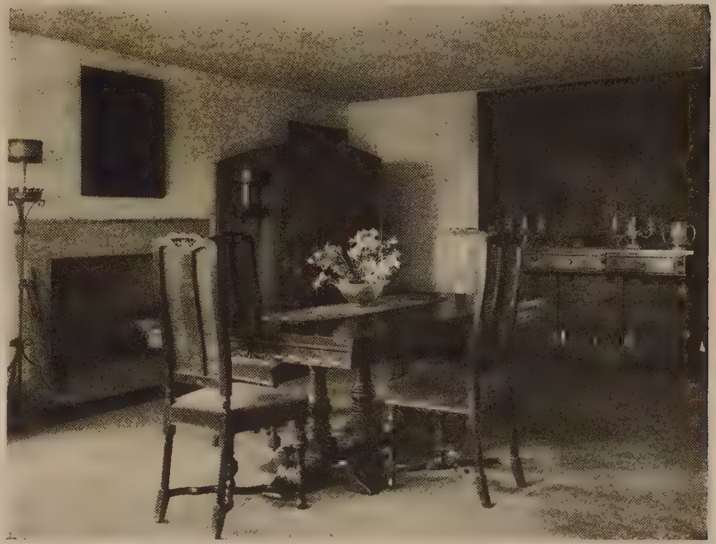

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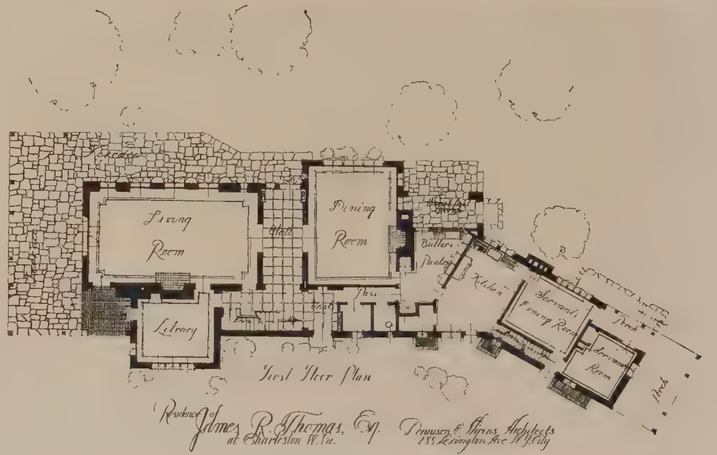

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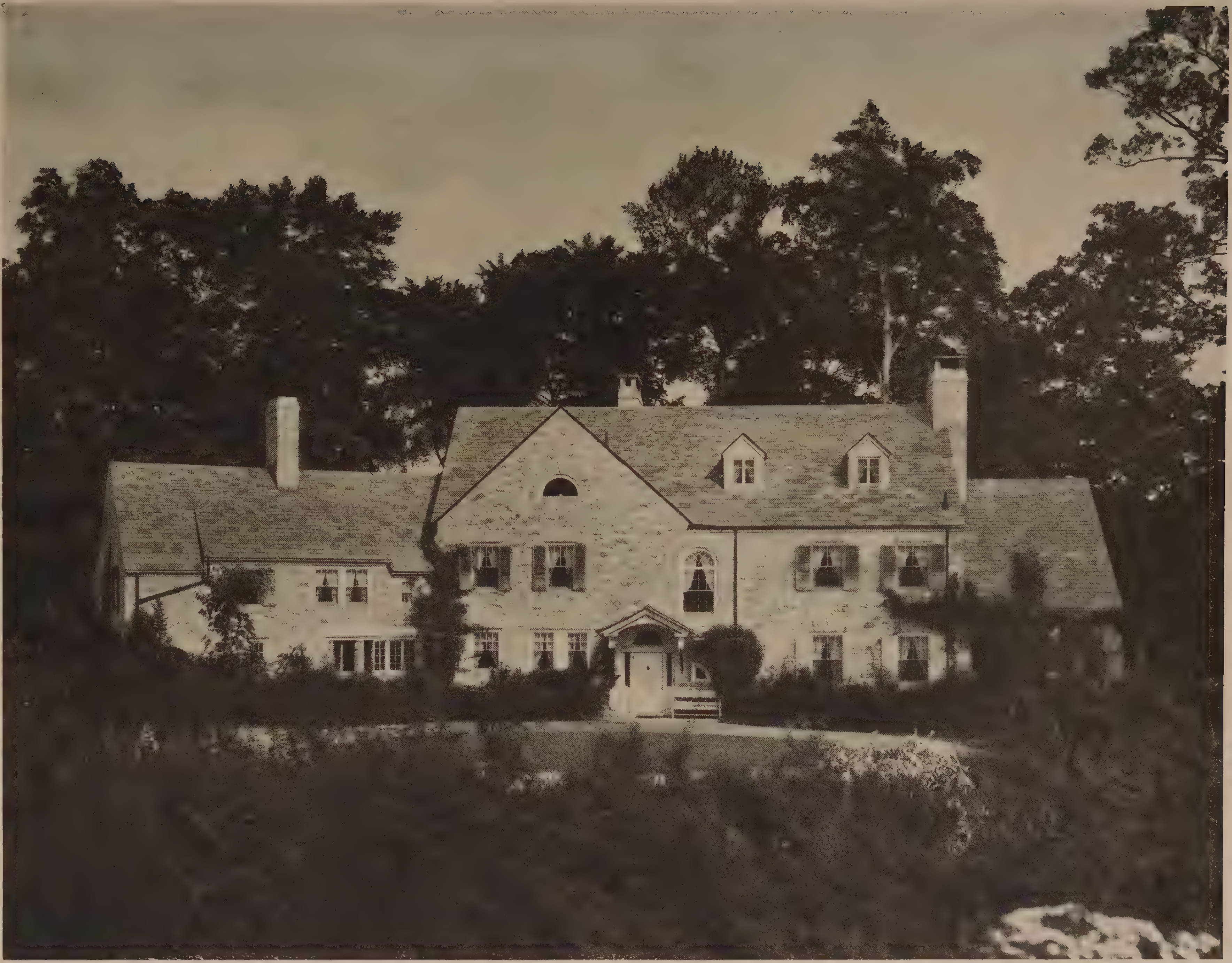
Dennison & Hirons, Architects.



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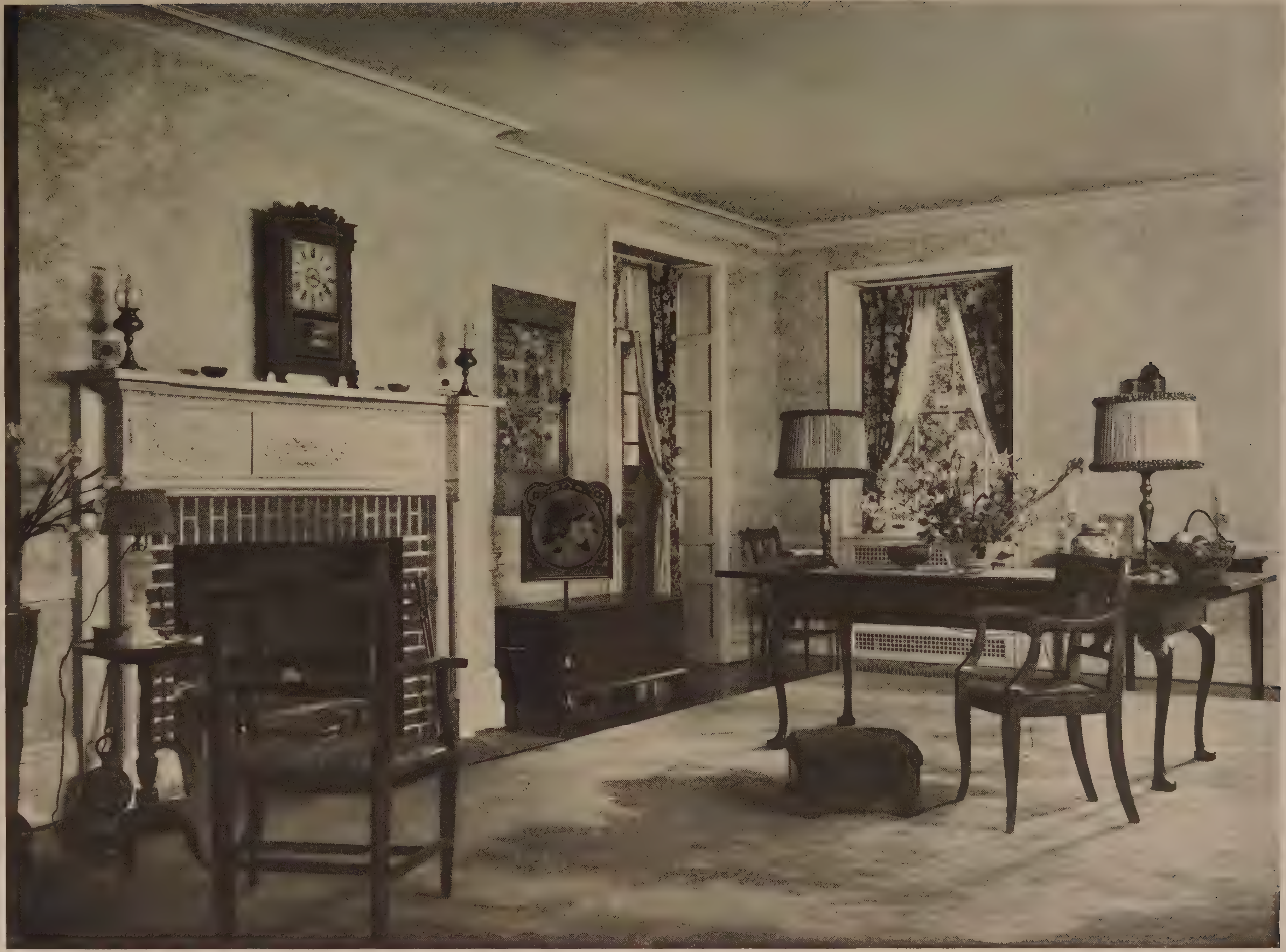
Dennison & Hirons, Architects.



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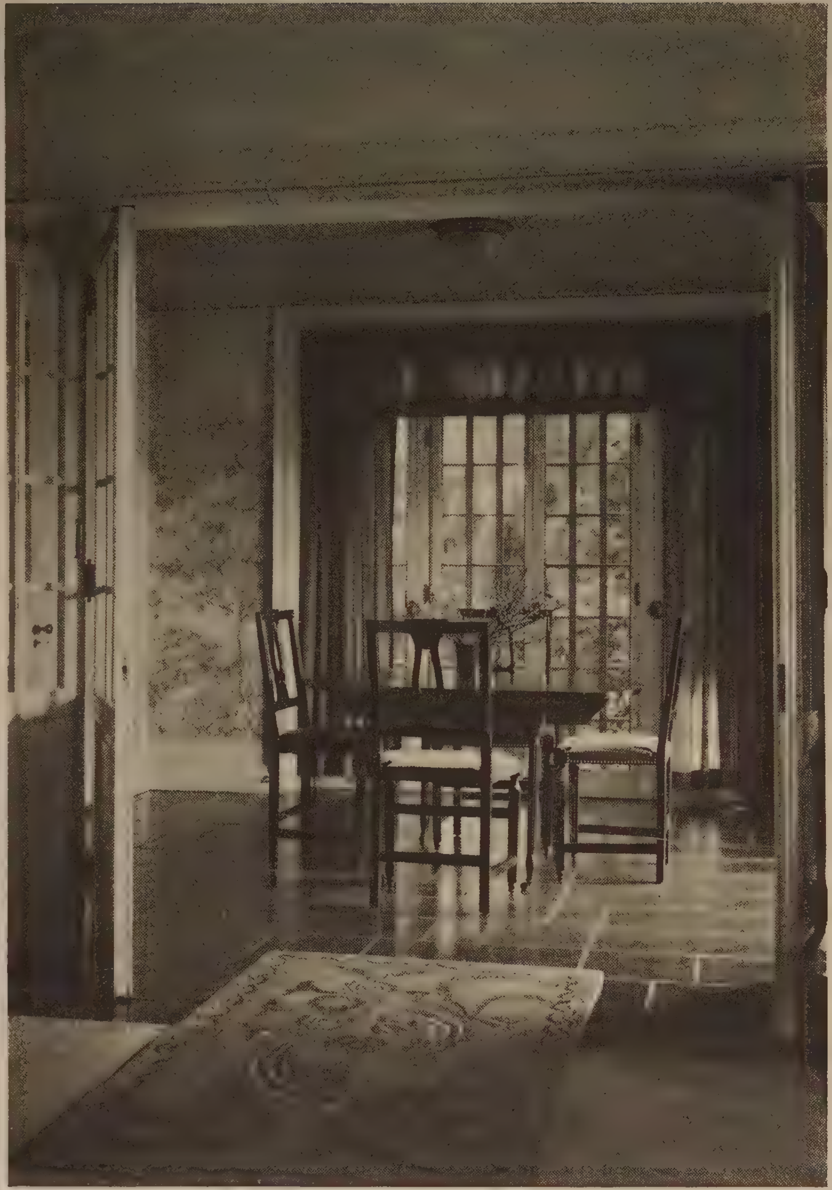

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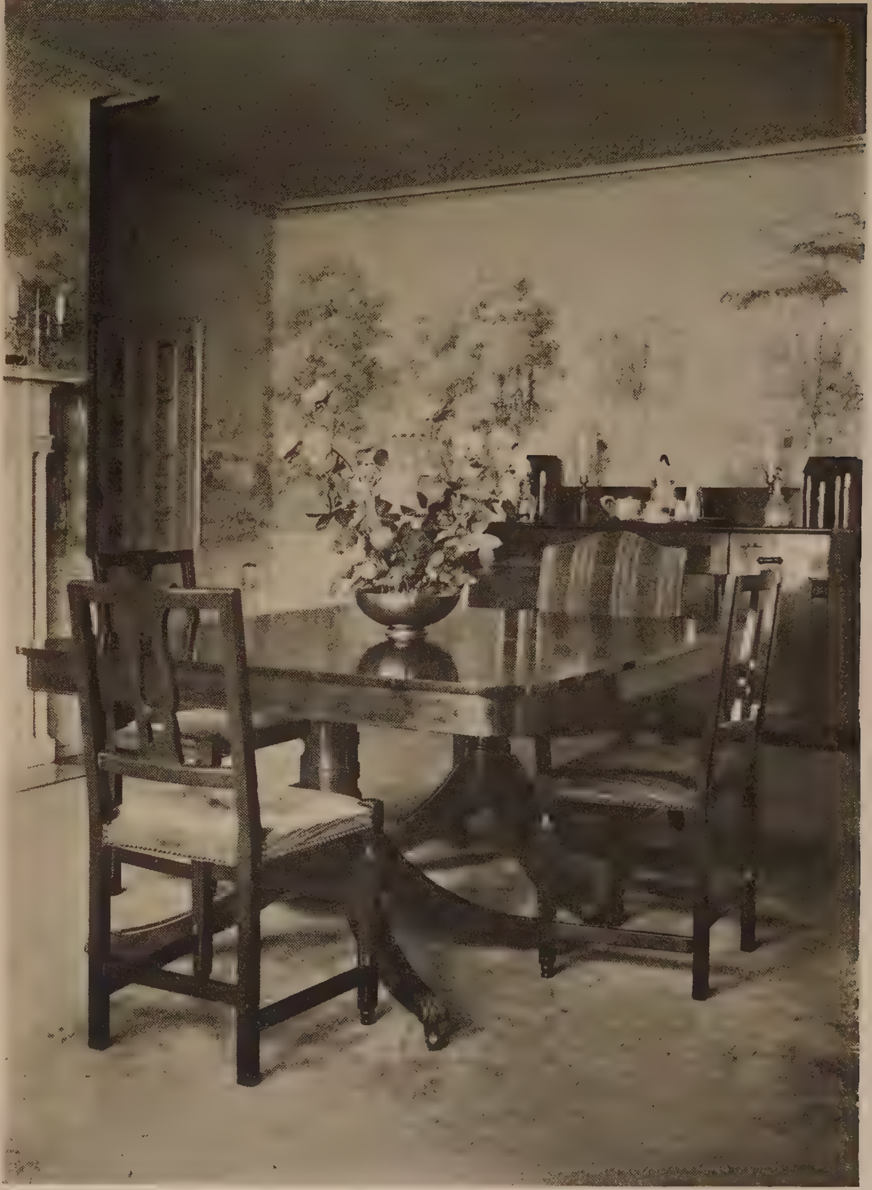

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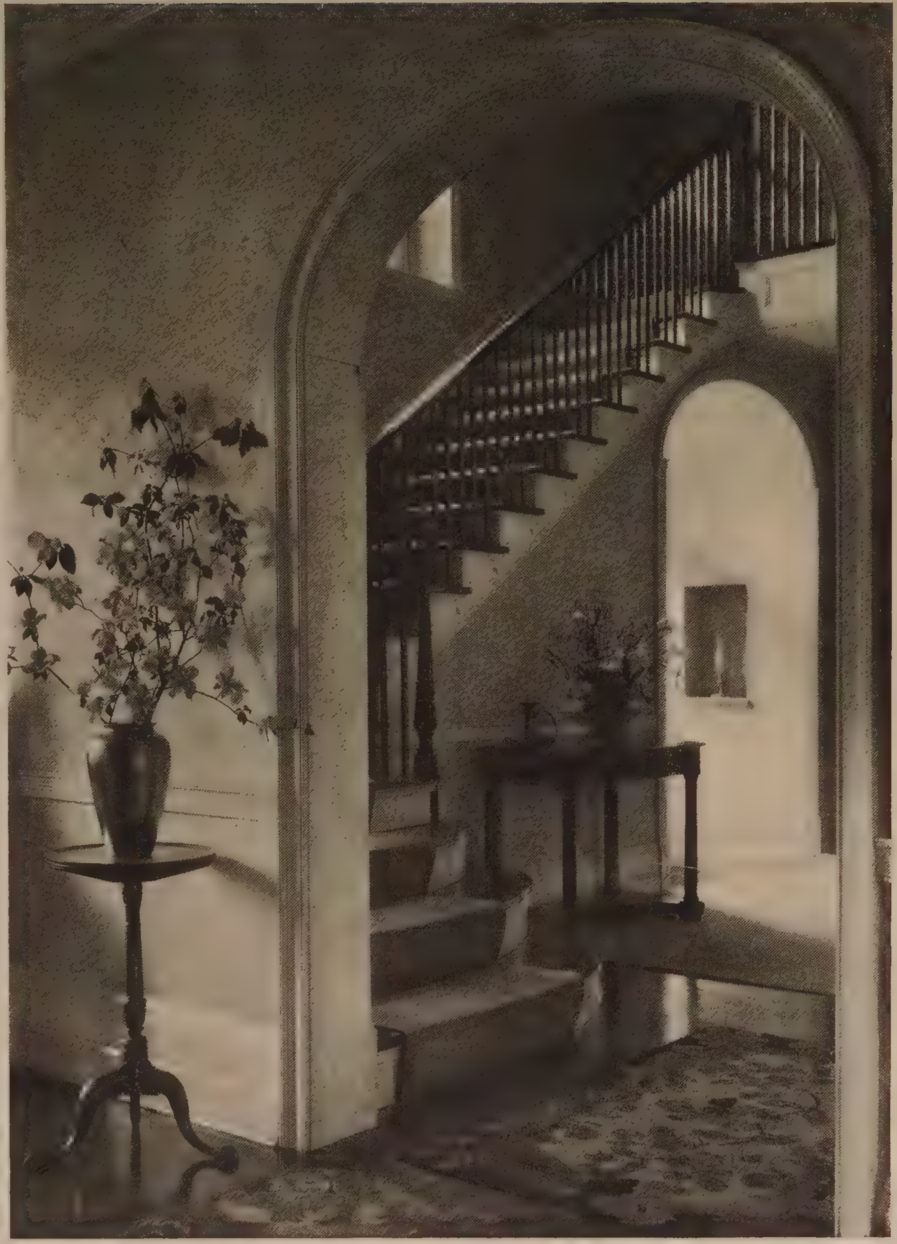
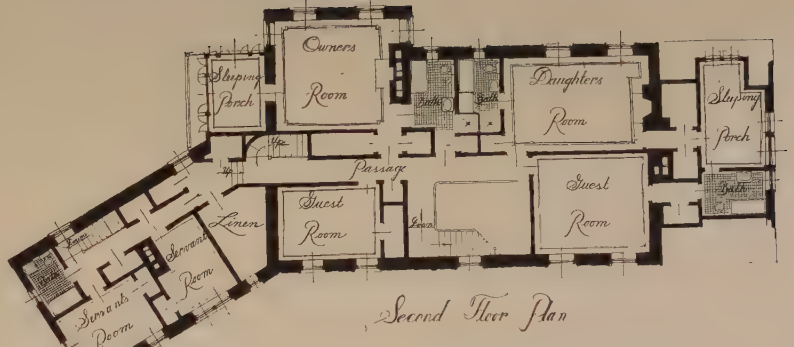
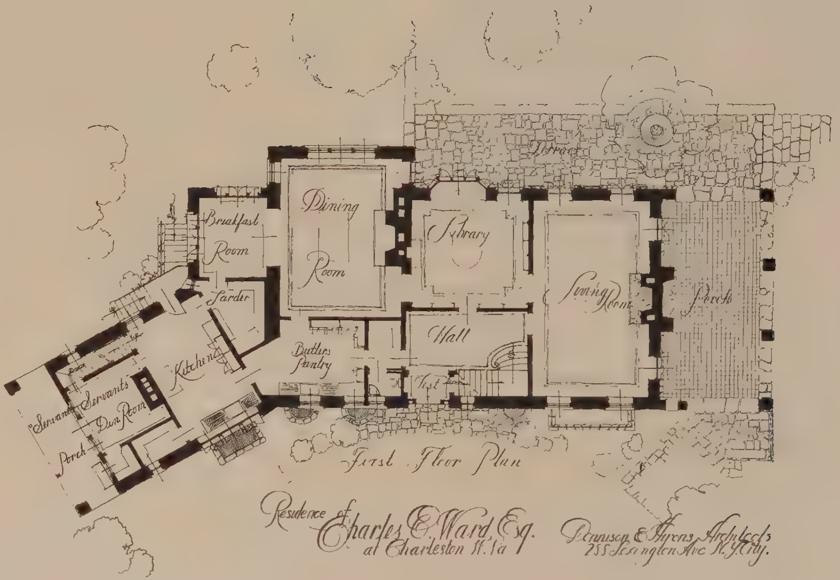
Dennison & Hirons, Architects.

RESIDENCE, CHARLES E. WARD, CHARLESTON, W. VA.



LIVING–ROOM, LOOKING TO HALL, RESIDENCE, CHARLES E. WARD, CHARLESTON, W. VA.





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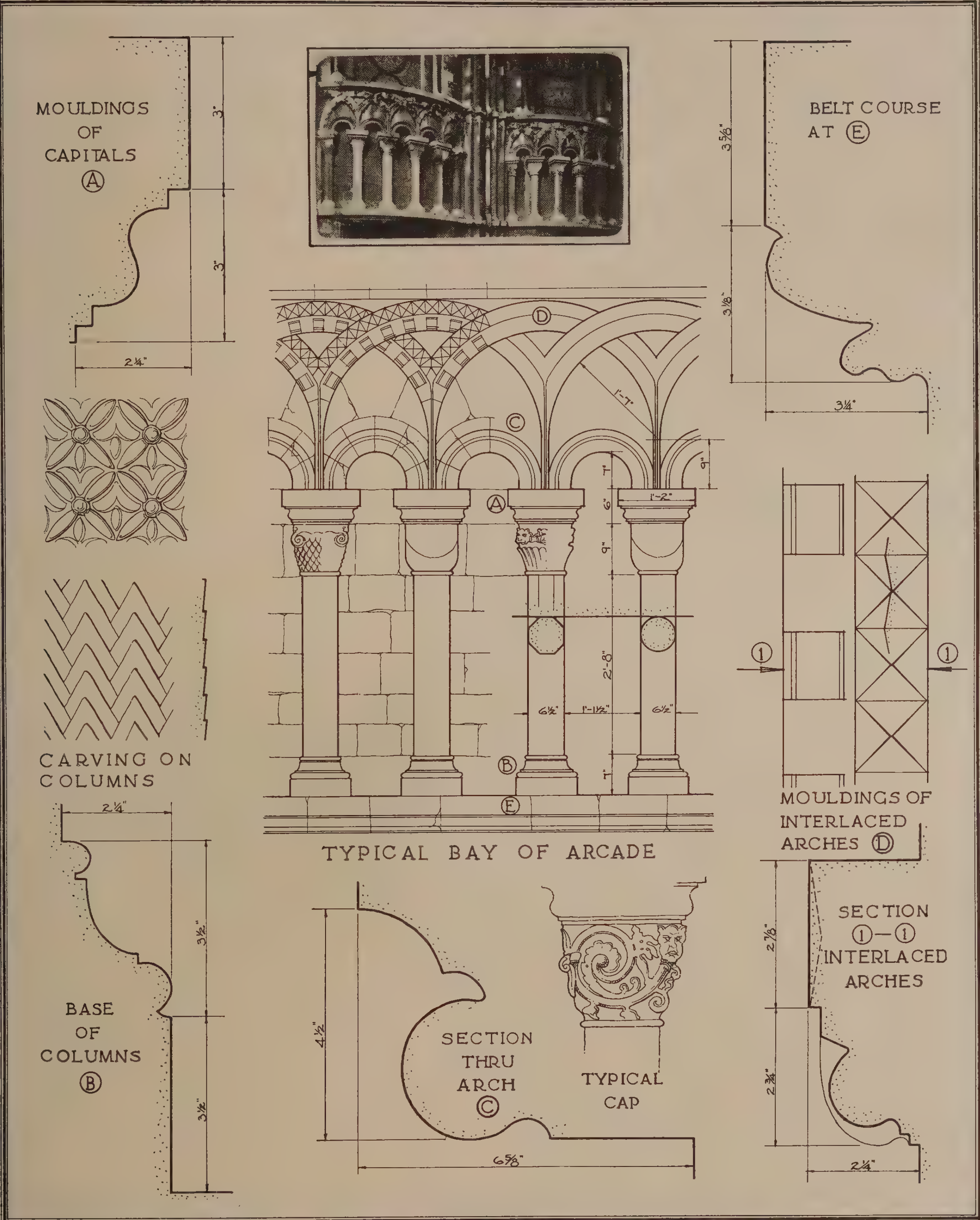

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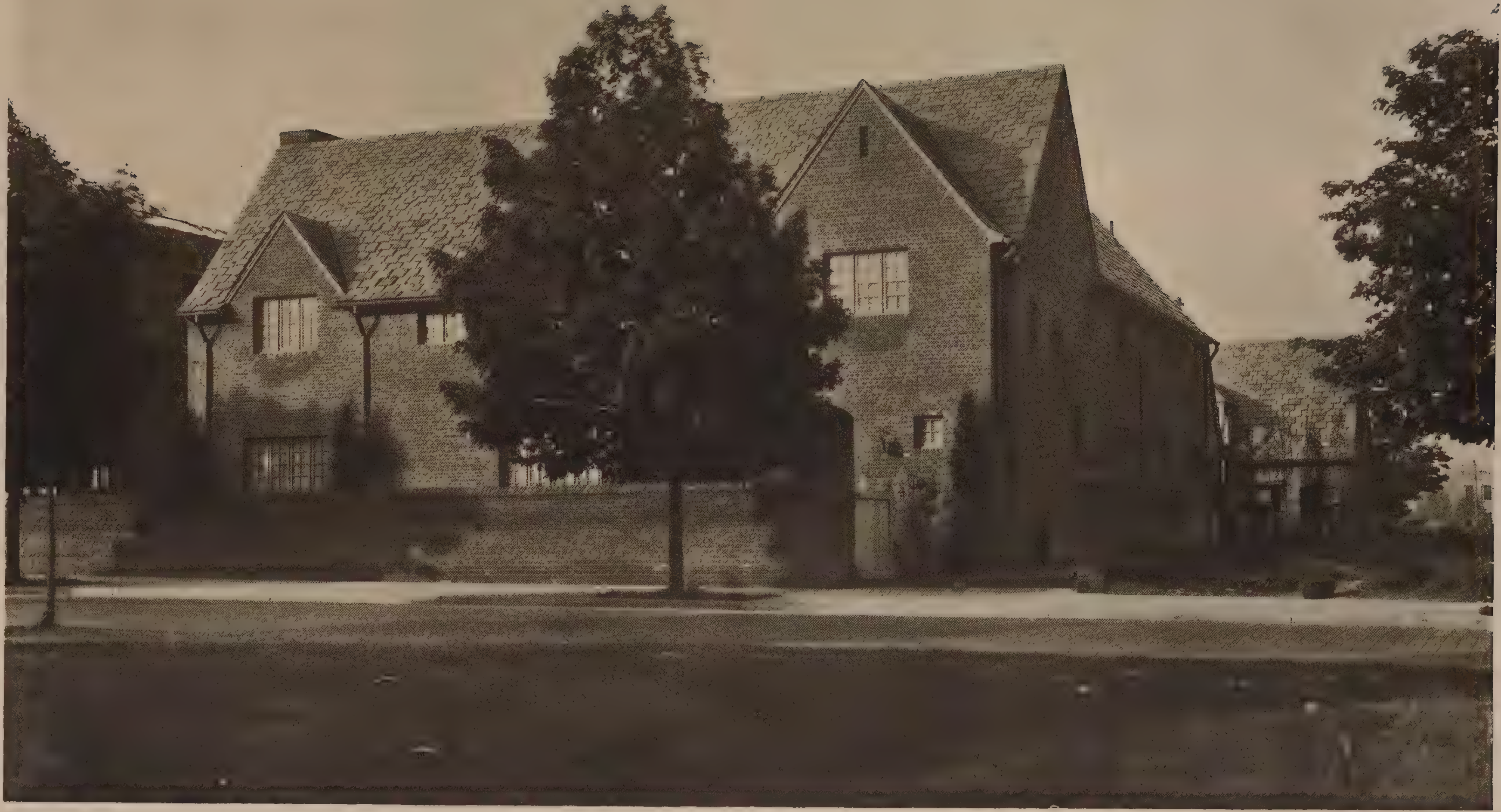

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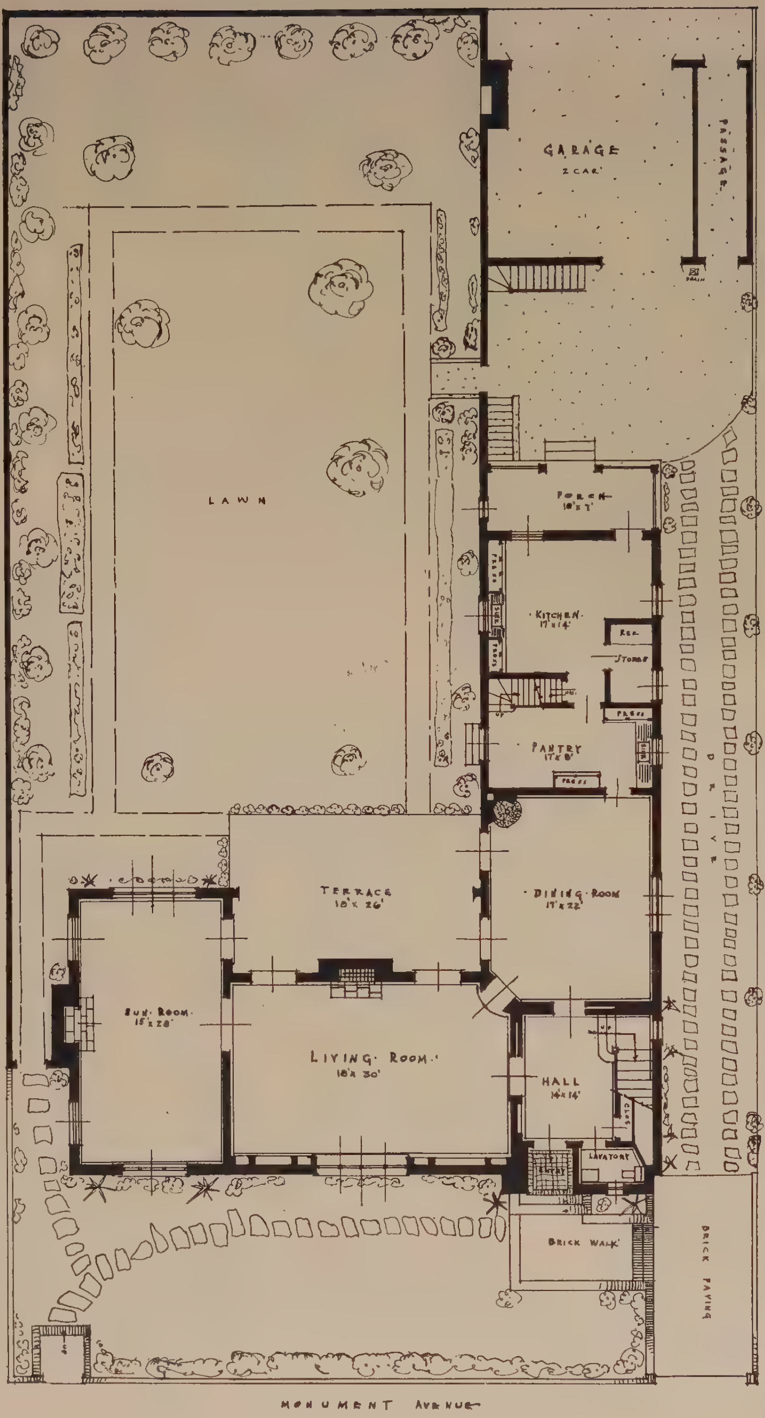
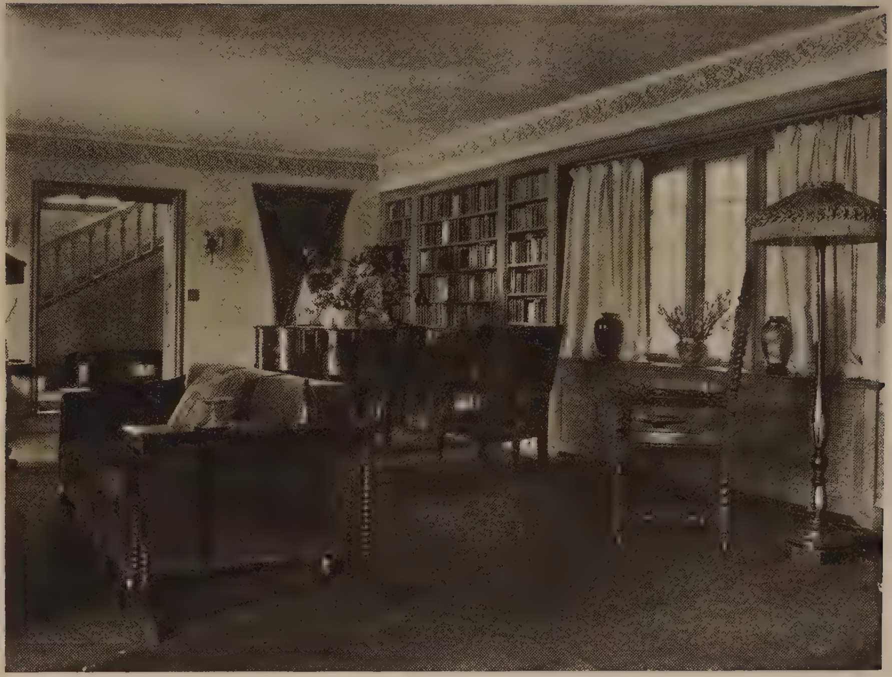
Duncan Lee, Architect.

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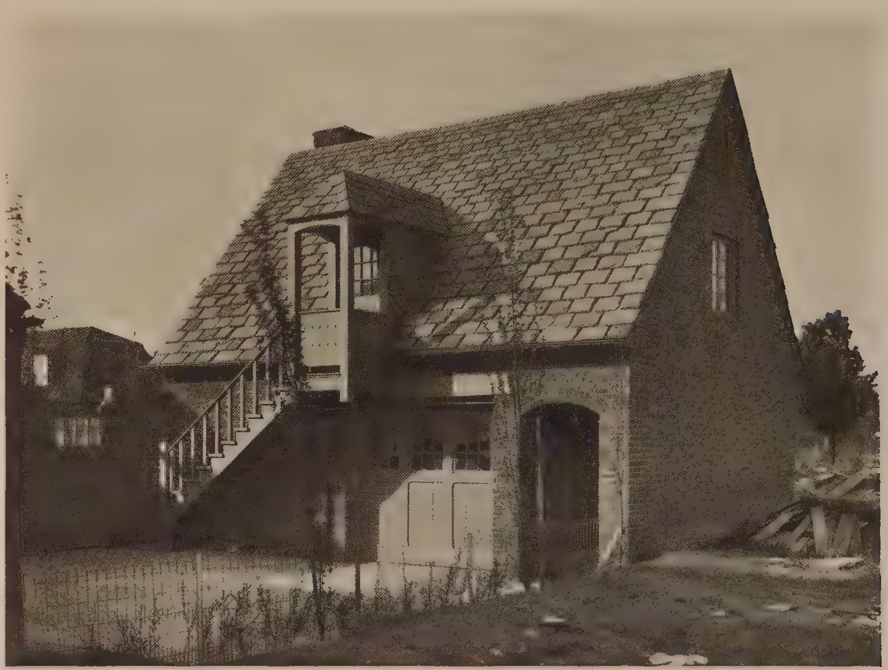
GARAGE.

Duncan Lee, Architect.

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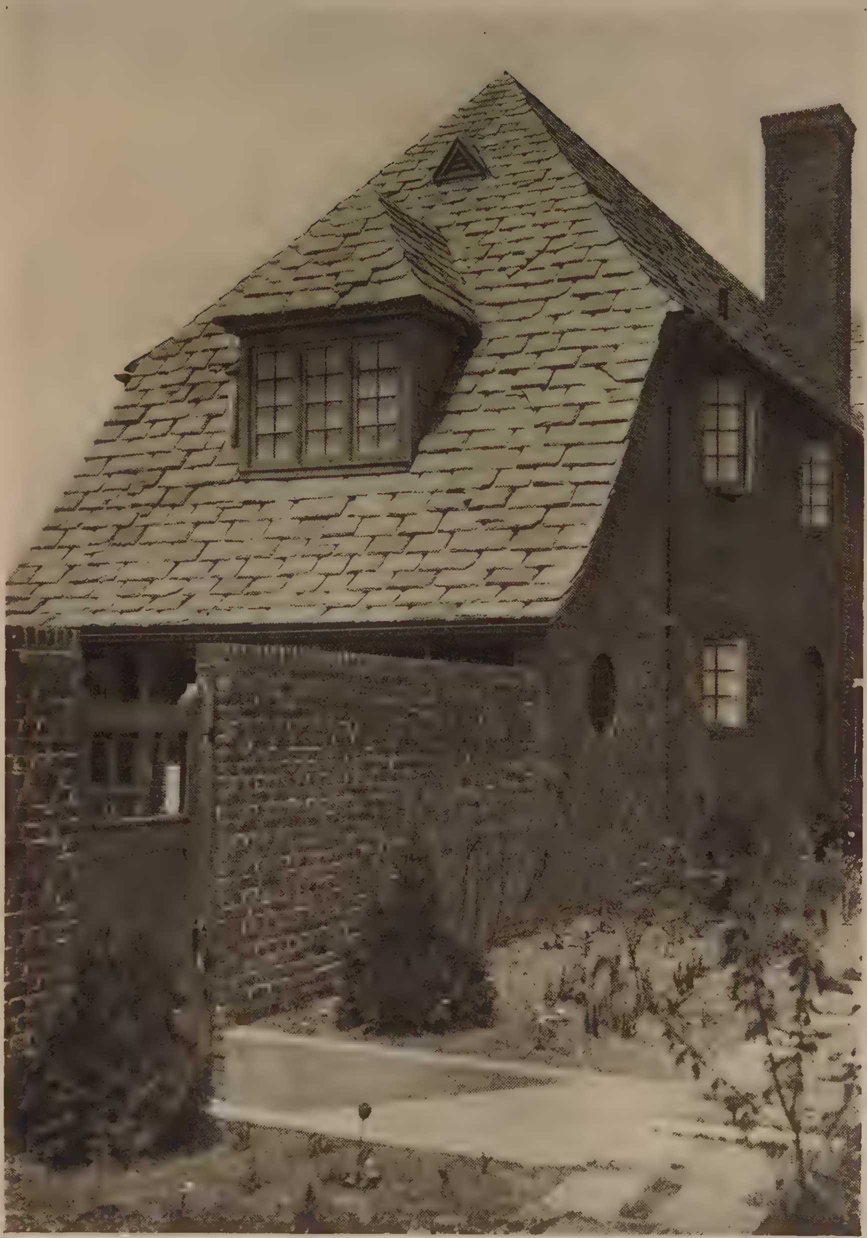
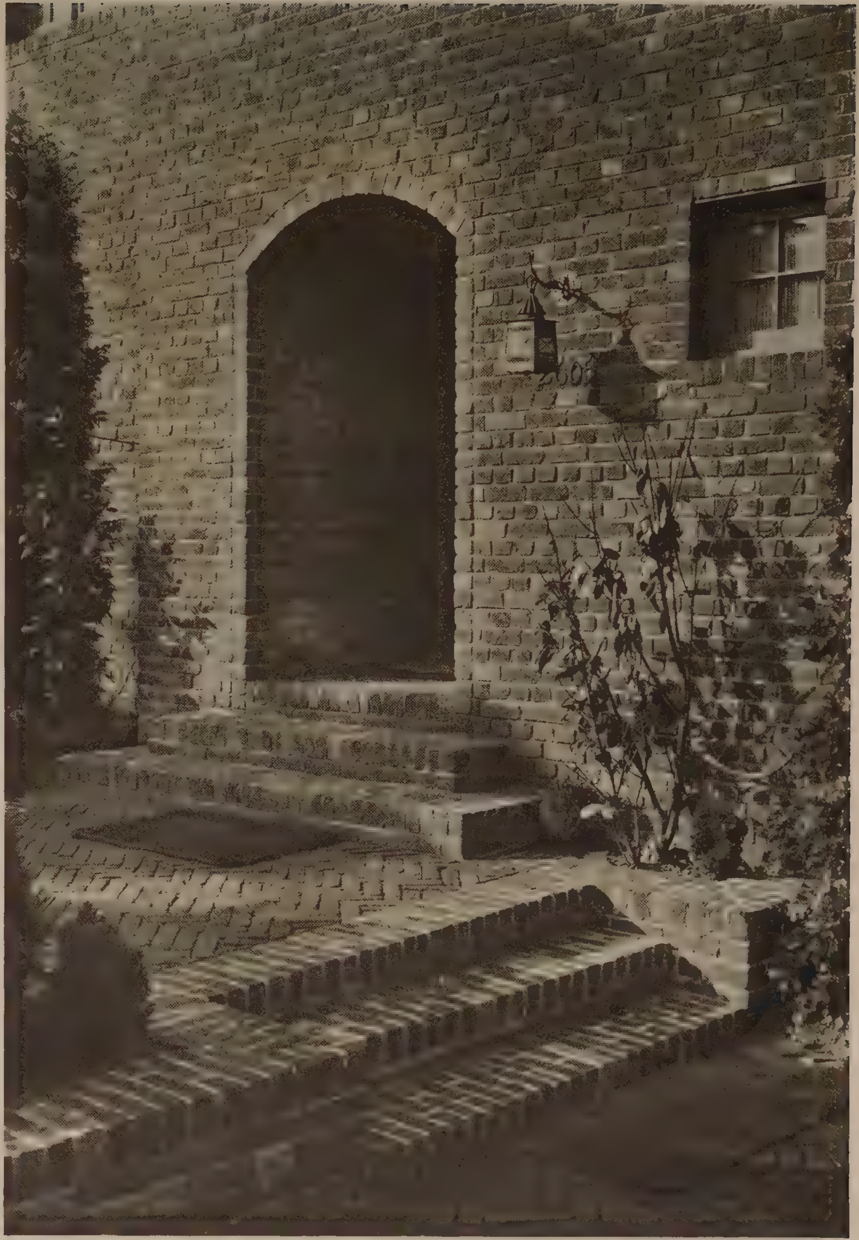


THE SERVICE WING.



MAIN ENTRANCE.

Duncan Lee, Architect.

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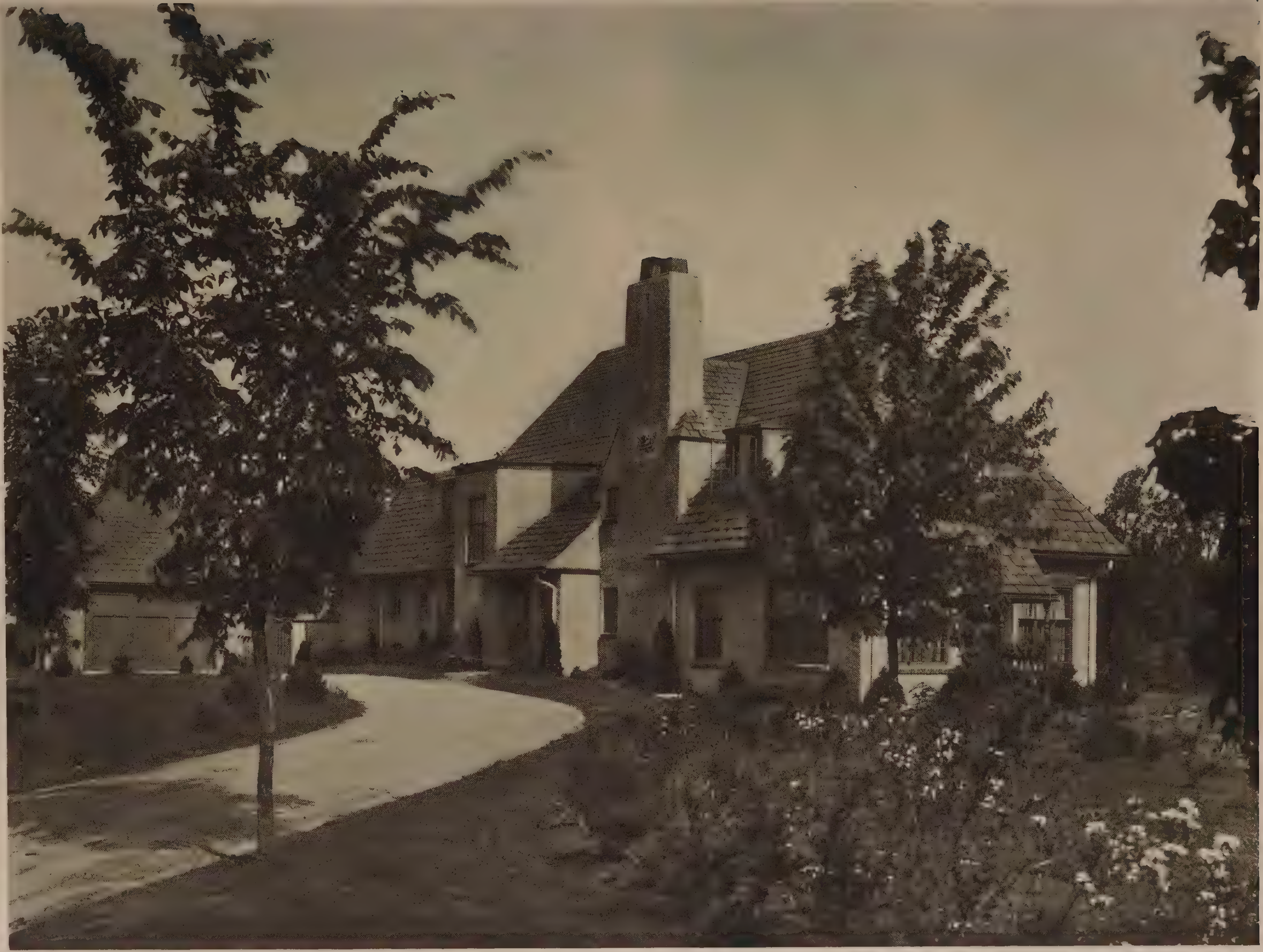

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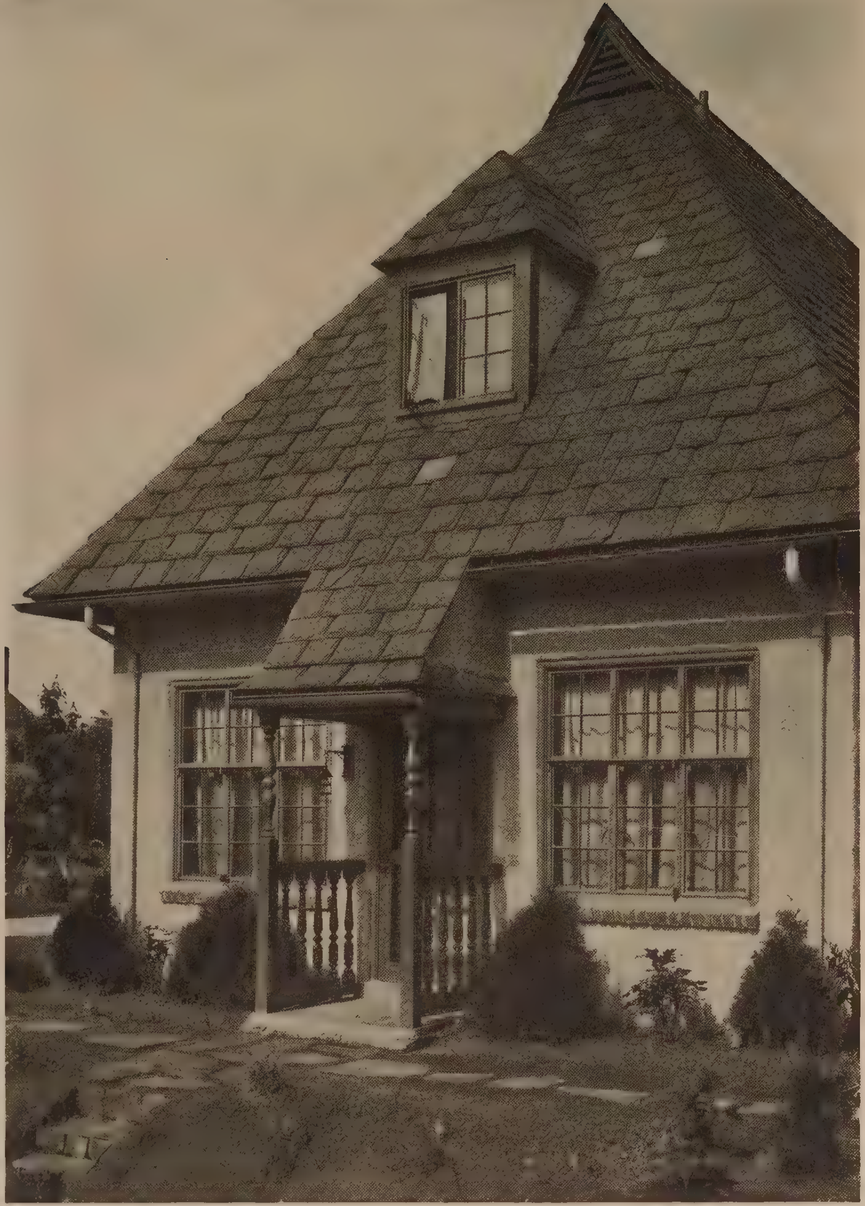

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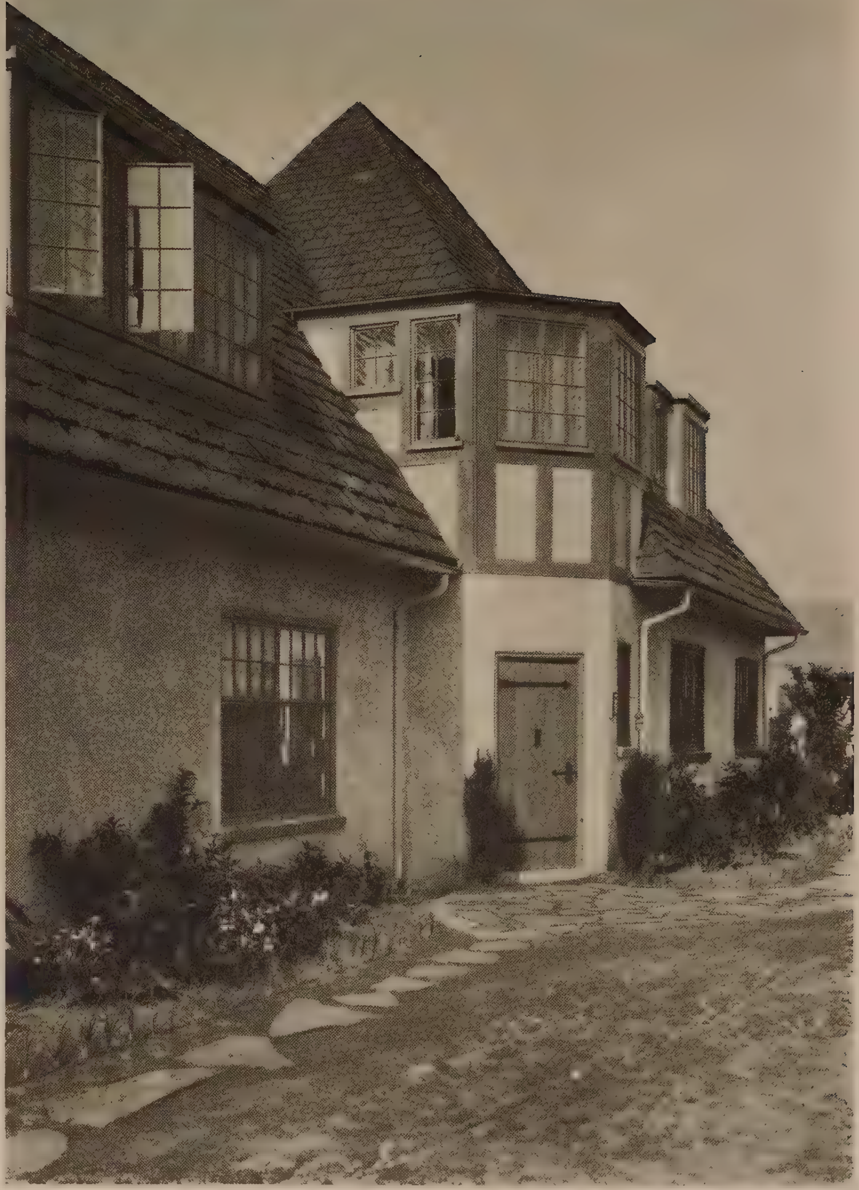
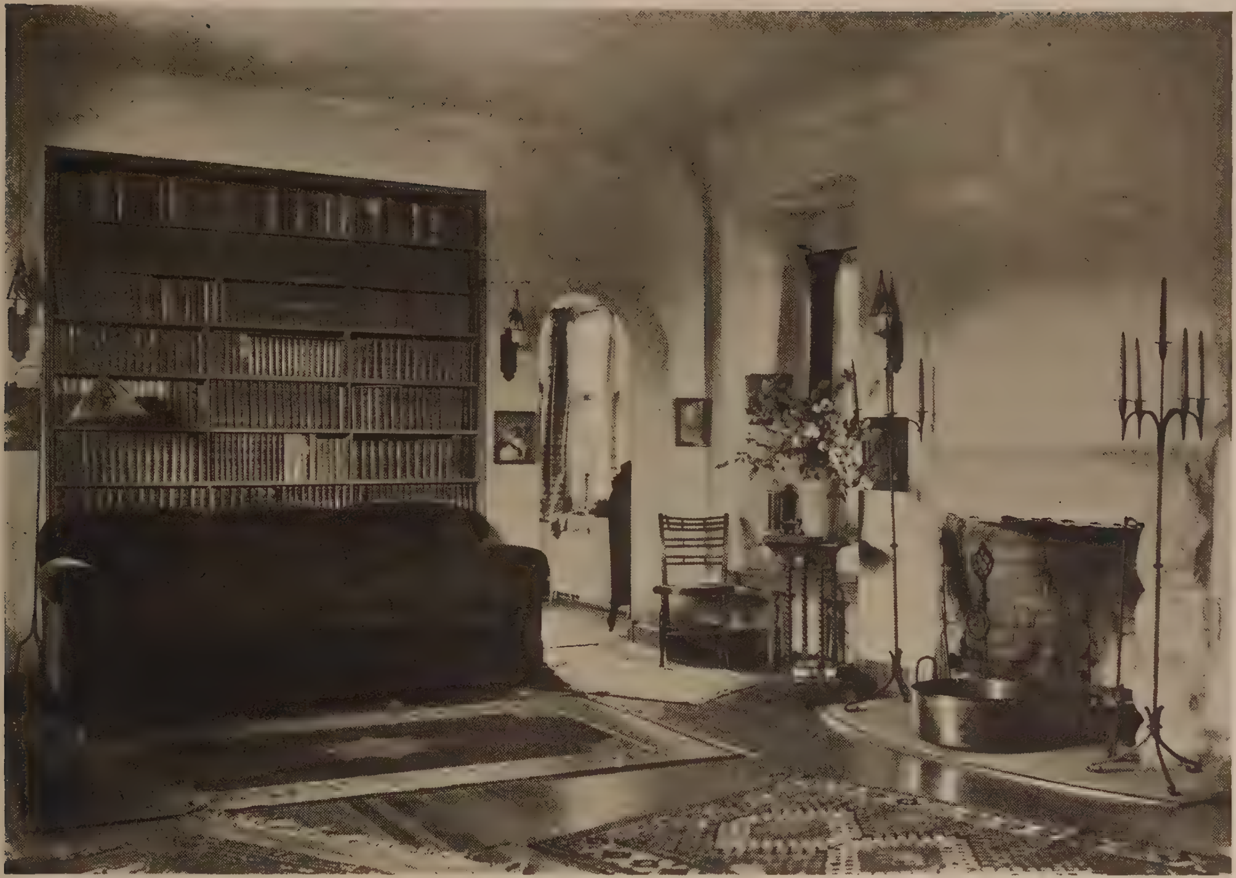


ENTRANCE FROM PAVED TERRACE.

Duncan Lee, Architect.

RESIDENCE, DR. FRED M. HODGES, WEST HAMPTON, VA.



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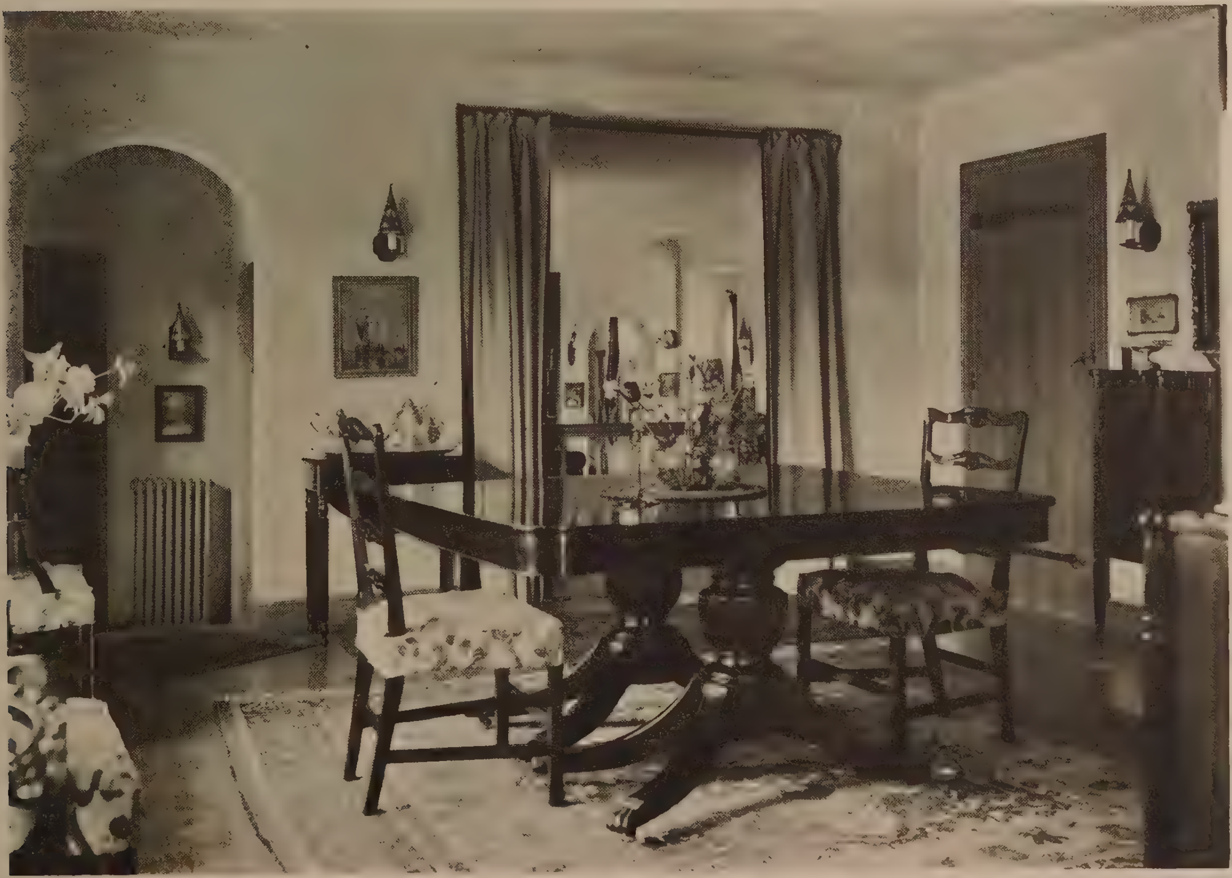
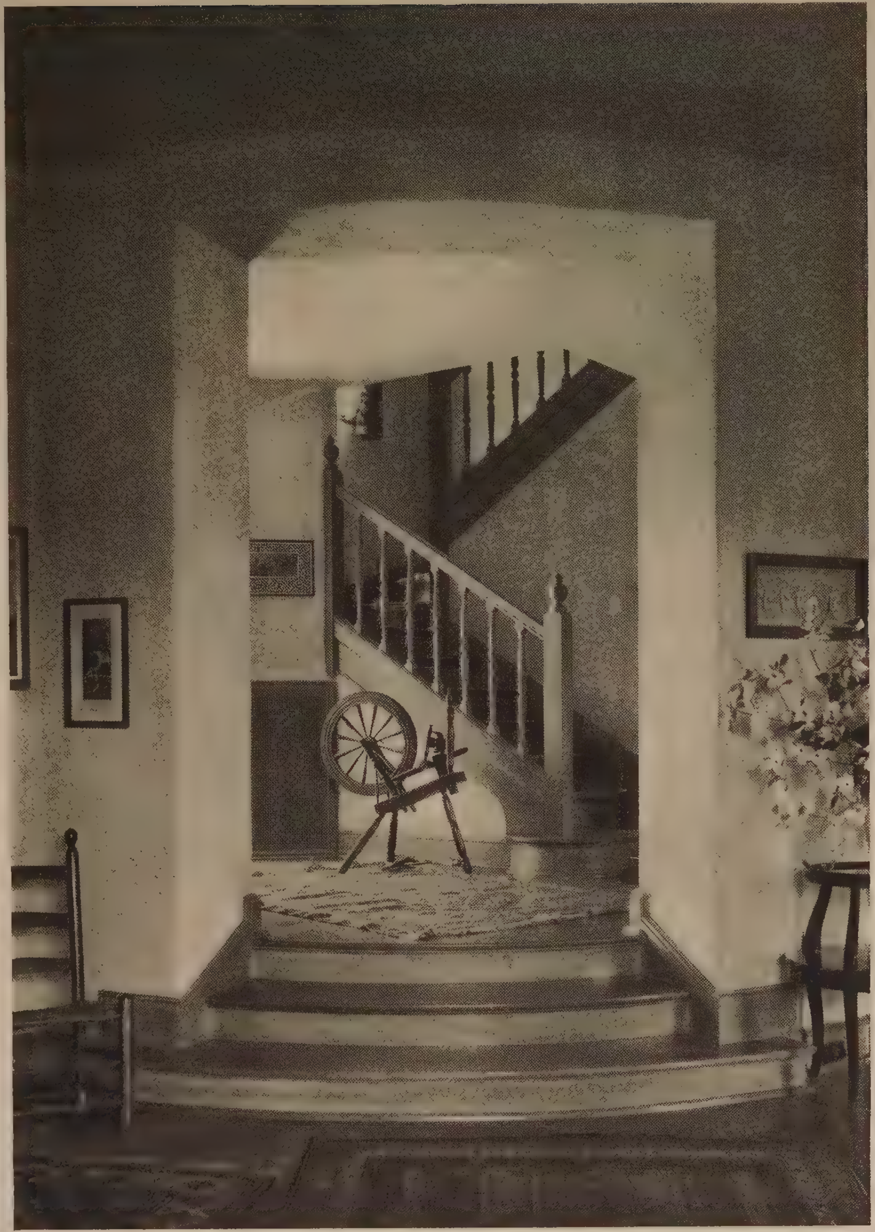
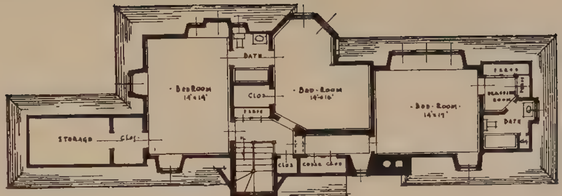
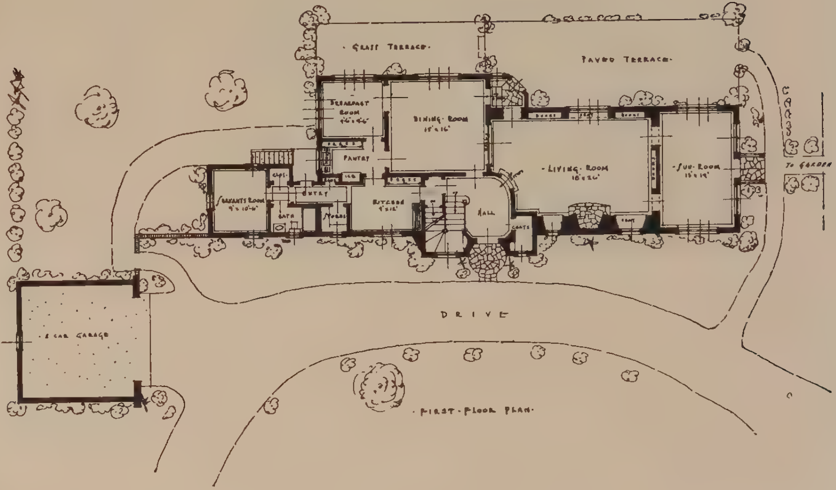


DINING-ROOM, RESIDENCE, DR. FRED M. HODGES, WEST HAMPTON, VA. Duncan Lee, Architect.





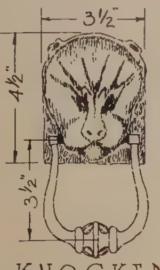
SECOND FLOOR PLAN



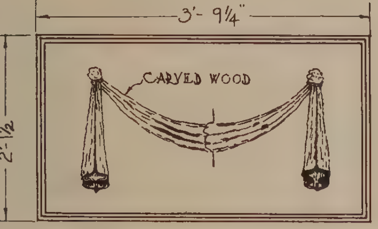
FIRST FLOOR PLAN

LIVING–ROOM, TOWARD STAIR–HALL, RESIDENCE, DR. FRED M. HODGES, WEST HAMPTON, VA,

Duncan Lee, Architect.



KNOCKER



ORNAMENT ON FRONT
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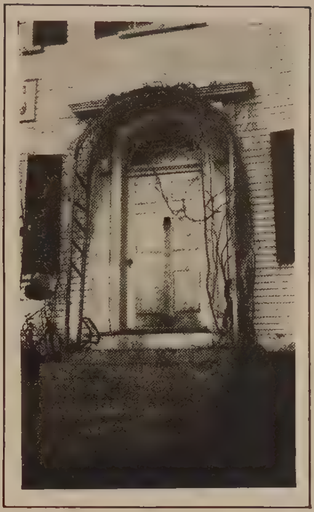

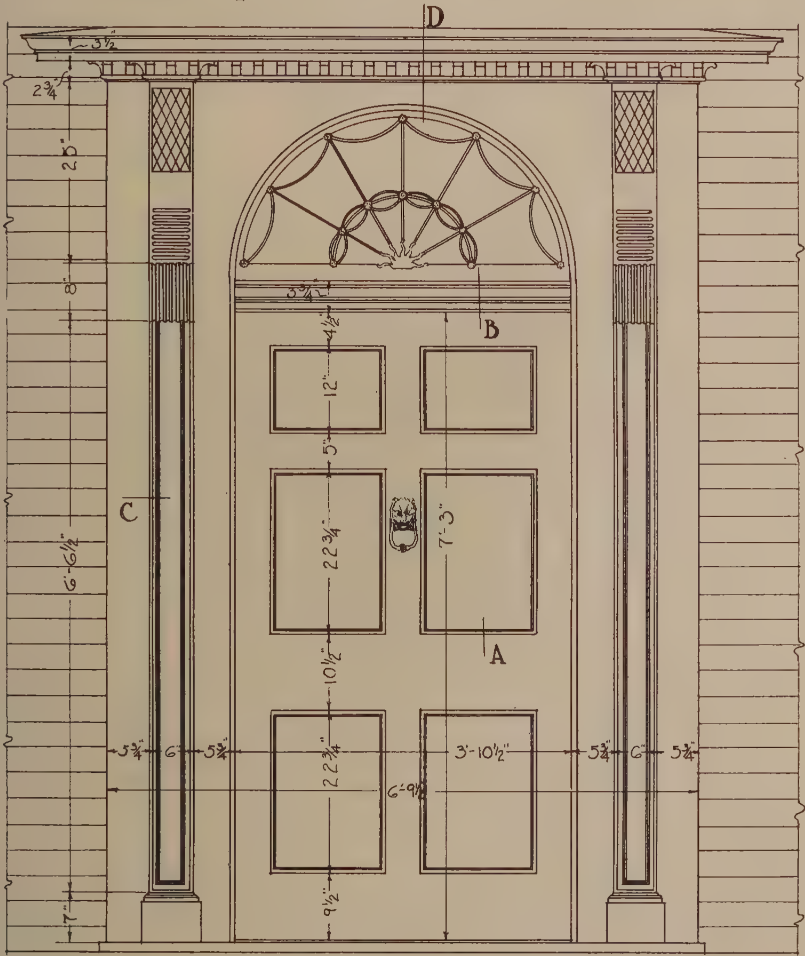

FRONT ELEVATION
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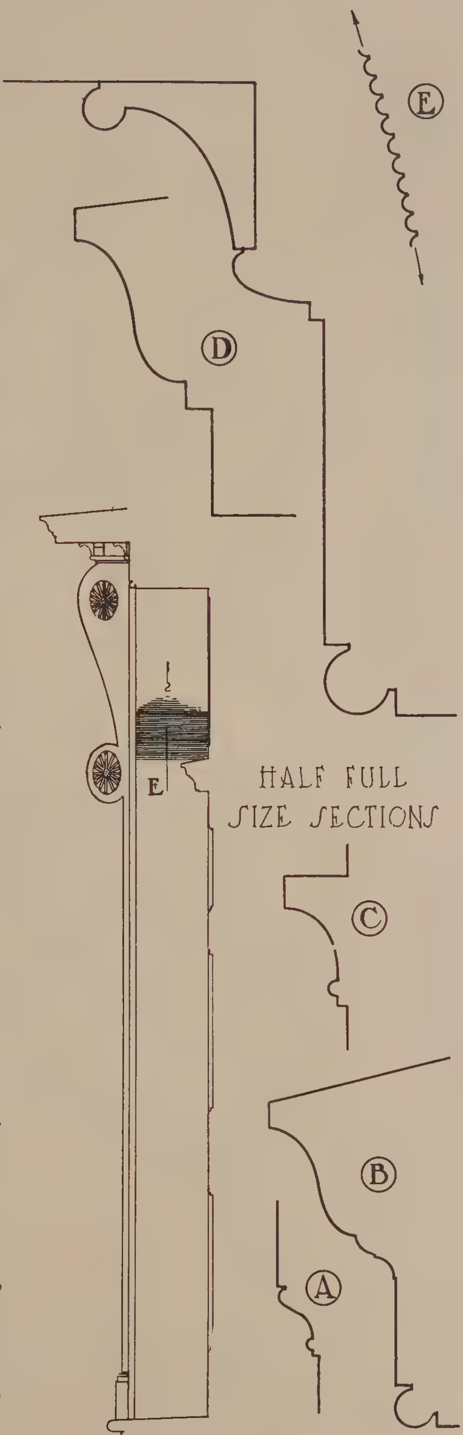


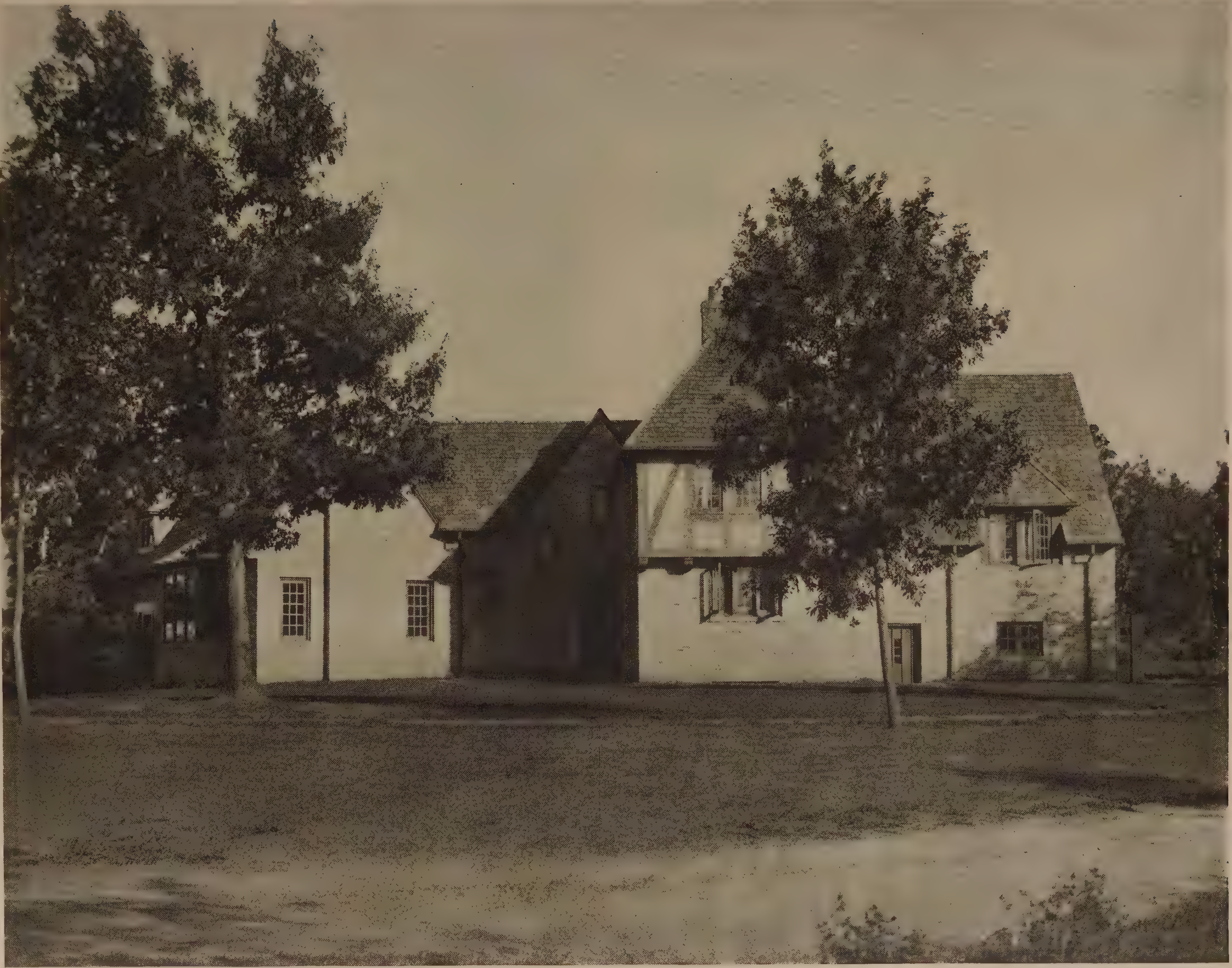
SECTION

HALF FULL SIZE SECTIONS

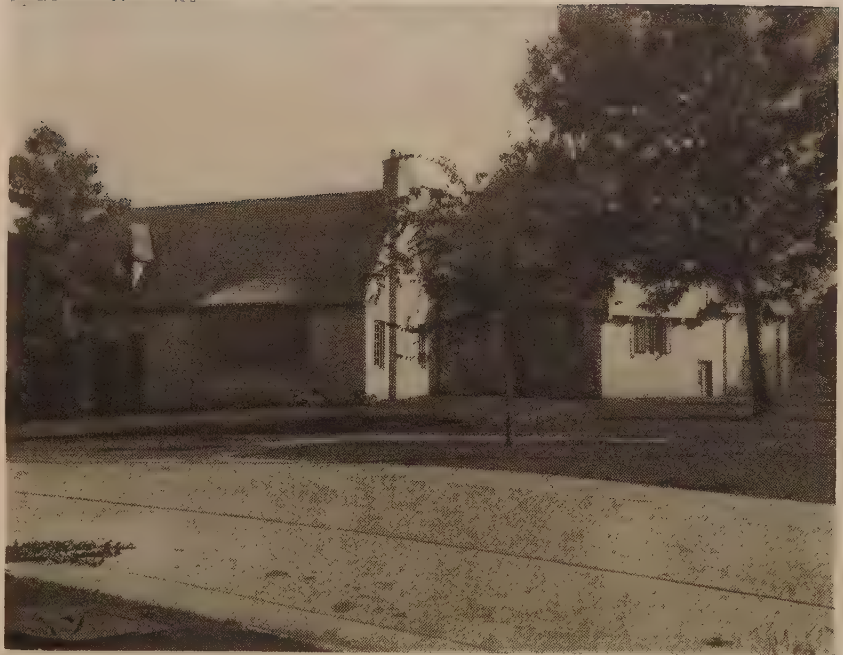
MAINE
COLONIAL
SERIES

DOORWAY of the THOS. McCOBB HOVSE
PHIPPSBVRG MAINE
BVILT IN 1806

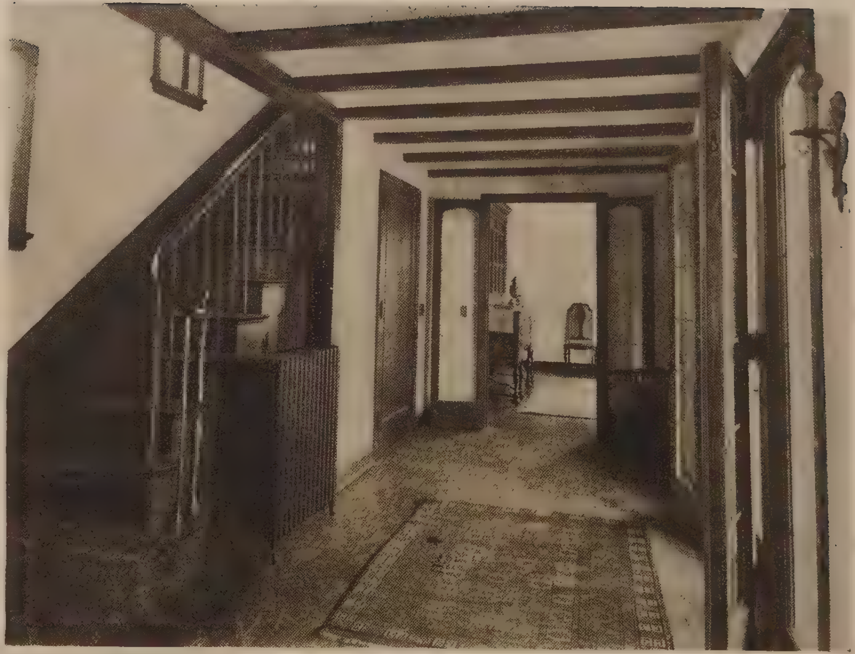
MEASURED AND
DRAWN BY
A. J. HARRIMAN.



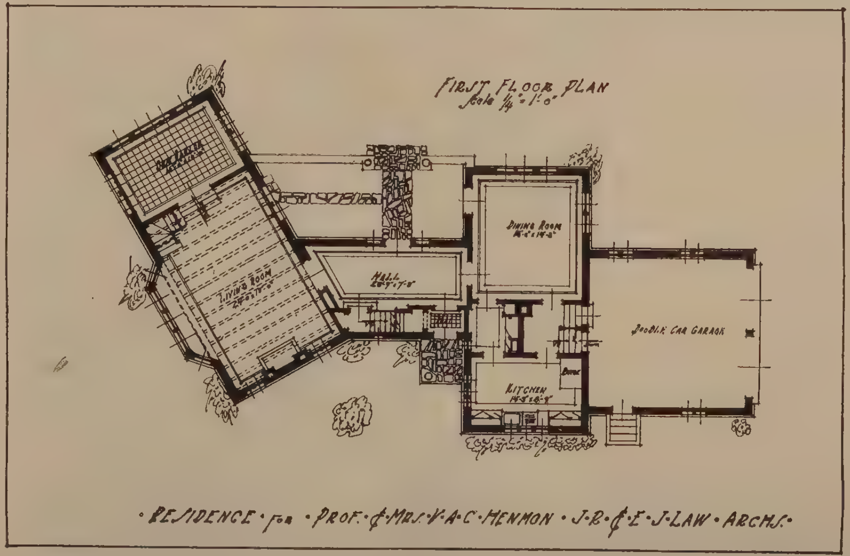
RESIDENCE, PROFESSOR AND MRS. V. A. C. HENMON, MADISON, WISC. James R. and Edward J. Law, Architects.

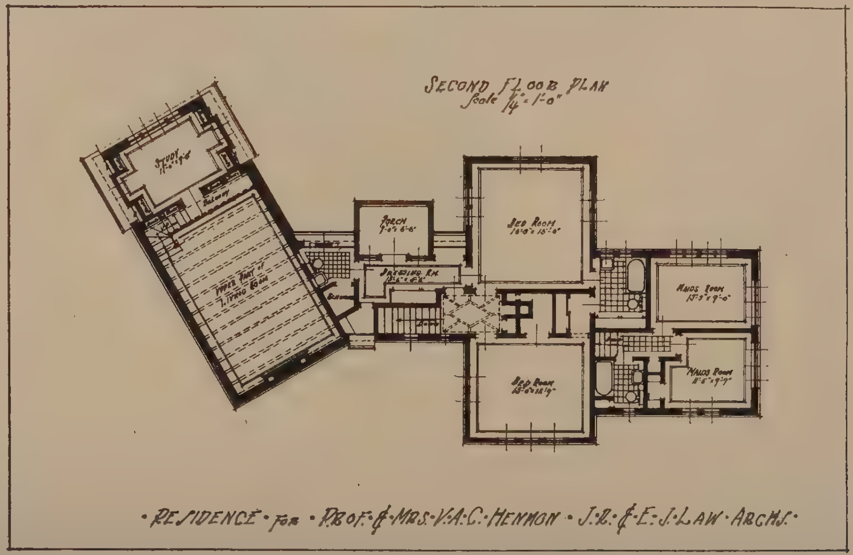


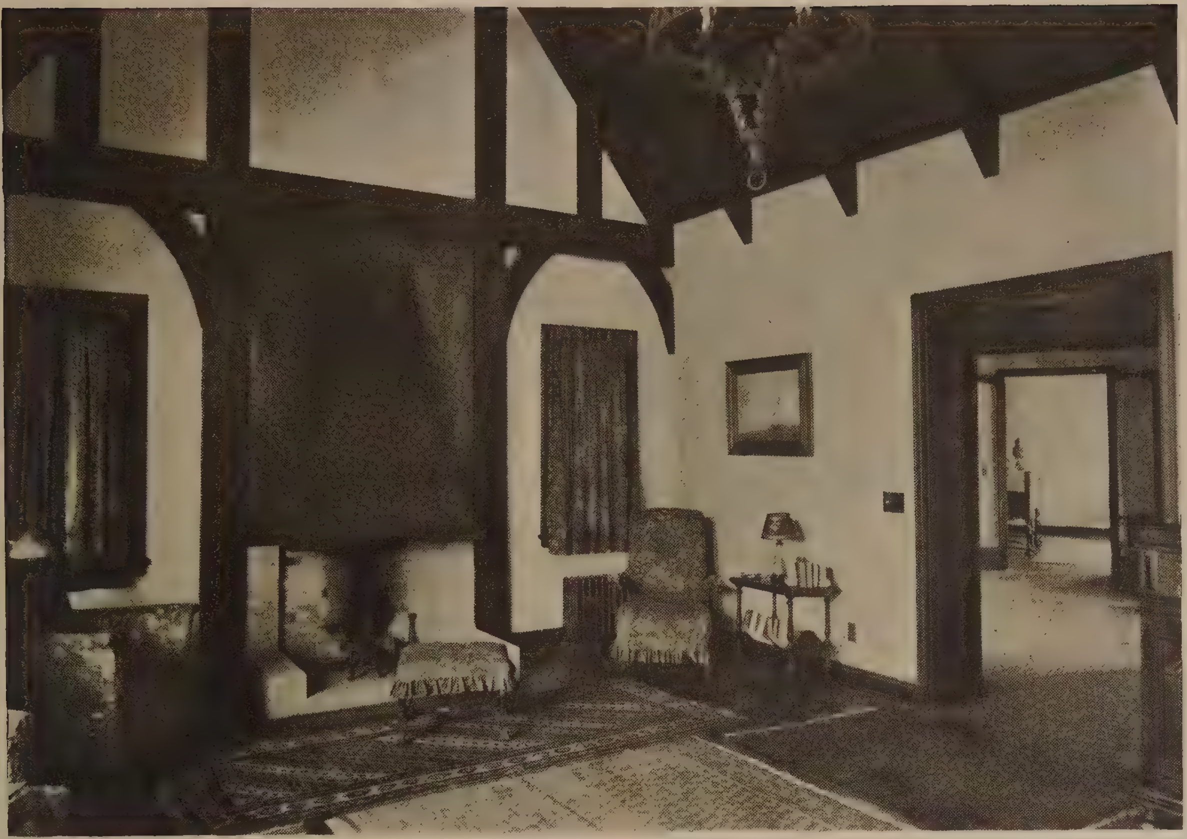
Detail.



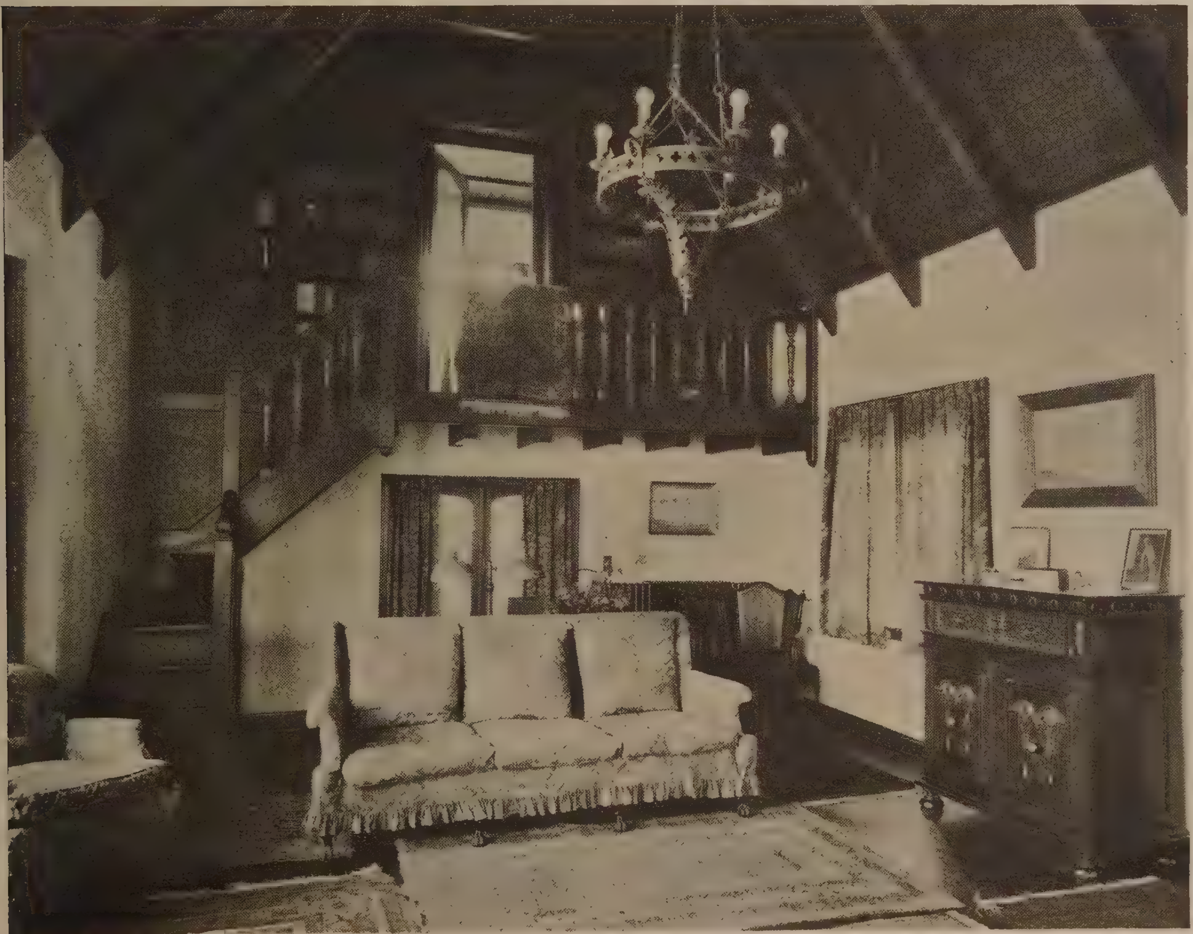
Hall.


FIRST FLOOR PLAN
Scale 1/4" = 1'-0"
DINING ROOM
HALL
LIVING ROOM
KITCHEN
DOUBLE CAR GARAGE
• RESIDENCE • for • PROF. & MRS. V. A. C. HENMON • J. R. & E. J. LAW • ARCHS. •


SECOND FLOOR PLAN
Scale 1/4" = 1'-0"
STUDY
BALCONY
UPPER PART of LIVING ROOM
PORCH
DRESSING RM.
BED ROOM
BED ROOM
MAIDS ROOM
MAIDS ROOM
• RESIDENCE • for • PROF. & MRS. V. A. C. HENMON • J. R. & E. J. LAW • ARCHS. •



LIVING-ROOM.



LIVING-ROOM.

James R. and Edward J. Law, Architects.

RESIDENCE, PROFESSOR AND MRS. V. A. C. HENMON, MADISON, WISC.

Book Reviews

SWEDISH ARCHITECTURE OF THE TWENTIETH CENTURY.

By Hakon Ahlberg. With a preface by F. R. Yerbury. Large quarto. Charles Scribner's Sons, New York.

To begin with, this is a most attractively made book with its wealth of illustrations printed on a dull-surfaced paper from collotype plates instead of the familiar half-tones. We note on the back of the title-page that it "is printed and made in France." Sweden has not been a country for architectural pilgrimages; at least, not in any general way. An occasional seeker after the unusual has ventured into the country and brought back with him a few photographs of exceptional interest and quite a few ideas well worth cultivating.

There is a certain native dignity and respect for decent tradition about the Swedes that has kept them from doing the freak things that we are familiar with in Germany and Austria. That their architecture has a native and individual character goes without saying, and that they have not been entirely content to adhere strictly to old forms is evident. But take it all in all, there is a sanity and assurance about most of the work that is shown in this book that is decidedly pleasing.

Our readers will remember that we published the Stockholm Town Hall last year. Perhaps one of its added claims to distinction is the fact of its being "a veritable exhibition of a modern school of craftsmanship."

Mr. Ragner Ostberg's beautiful town hall is shown in a number of plates in this book, and there is other work by this distinguished architect.

In addition to the many illustrations from photographs there are reproductions of drawings and sketches giving plans and details. In all, the work of twenty-three architects is shown, representing some of the best-known men of modern times.

Town Hall, Stockholm. Interior of the Guild Hall.
Ragner Ostberg, Architect.

Sweden is a land of splendid craftsmen, and her architectural sculpture and fresco painting, such a marked element of her modern buildings, have already made a strong impression in America.

The well-known Café Savarin in the Pershing Square Building is richly decorated in the Scandinavian manner, and has attracted the attention of many architects and decorators.

The introduction gives a brief review of the development of Swedish architecture with comments on the work of leading men of to-day. The text has the charm of the best examples of Swedish architecture, a certain modesty and sincerity refreshing in these days of much fine writing and aggressive assertion.

"In general, our nation is lacking in sharp and critical power of observation, and if we sometimes do see clearly, we seldom possess the faculty of presenting the results of our observations in clear and concise language." Happily Mr. Ahlberg has the "faculty," and his text is to the point.

NARCISSUS: AN ANATOMY OF CLOTHES.

By Gerald Heard. E. P. Dutton & Co., New York.

Carlyle once wrote a book about clothes, you remember; "Sartor Resartus" it was called, and if you have read it, or tried to, you know what it means to read something that keeps you guessing what it is all about. Mr. Heard seems to think that man has evoluted about as far as he can go in a Darwinian sense, and that the future is to manifest his superiority in such matters as clothes, architecture, etc. He traces the development of clothes and their reflection in architecture and talks about "the great Life Force" that is going to carry on the progress of man.

The analogy between clothes and architecture may not have been brought to your notice before, but come to think of it the Assyrian Mitre and the Messopotamian Zuggerat are much alike in form, and the four-centred arch of the Tudor period is surprisingly akin to the lines of contemporary costumes.

There are a lot of things said that will set you thinking, brushing up your knowledge of the history of architecture, and afford you entertainment. It's a little book you can stick in your pocket.

THE AMERICAN HOUSE.

Being a Collection of Illustrations and Plans of the Best Country and Suburban Houses Built in the United States During the Last Few Years. Edited by Charles S. Keefe, Architect. U. P. C. Book Co., 243–249 West 39th Street, New York.

This is a revised edition of a well-known book, containing a number of attractive houses, of Colonial, Italian, French, Spanish, English types, designed by architects of reputation, and there are also shown a number of interiors and some attractive doorways.

There are plans accompanying the photographs of the houses, and it makes a useful and helpful reference work for any one interested especially in residential work.

WOOD-FINISHING.

By Harry R. Jeffrey, State Teachers College, Emporia, Kansas. The Manual Arts Press, Peoria, Ill.

This book answers the need for a text on wood-finishing which is adapted to the requirements of the school shop. The maximum amount of information on the subject has been put into as few pages as possible without sacrificing clearness. French-polishing, enameling, and stenciling are included. Contains formulas for stains and fillers. The refinishing of old wood furniture also is adequately treated, and the refinishing of the automobile has received attention. The more important processes are illustrated by photographs. Every teacher of woodworking and every craft worker in wood will find the book helpful. A carefully prepared index adds greatly to its convenience.

LIGHTING FIXTURES AND LIGHTING EFFECTS.

By M. Luckiesh, Director Lighting Research Laboratory, National Lamp Works of General Electric Company.

The book should be ~~of~~ interest ~~and~~ value to architects, engineers, electrical men, interior decorators, display managers, and all who have to do with the scientific and intelligent use of artificial light.

A detailed analysis of lighting fixtures and light is given, together with practical information on such matters as painting, equipment, and fixtures for both direct and indirect lighting.

THE ARCHITECTURE OF JOHN RUSSELL POPE.

With an introduction by Royal Cortissoz. Part Two. Portfolio. William Helburn, Inc., New York.

The twenty-five plates in this second part of "The Architecture of John Russell Pope" are entirely given to showing the architect's comprehensive plan for making over Yale University into a coherent and unified group of college buildings. The drawings showing plans and elevations are by O. R. Eggers.

That it is a scheme of both dignity and beauty and one that would put the university among the great Gothic collegiate centres goes without saying, but we rather think that it can be only a dream project since the completion of the Harkness Memorial and the beginning of other modern additions to the existing college group.

PROVINCIAL HOUSES IN SPAIN.

By Arthur Byne and Mildred Stapley, Corresponding Members of the Hispanic Society of America, authors of "Spanish Interiors and Furniture," "Spanish Gardens and Patios," etc. Large folio. William Helburn, Inc., New York.

The authors of this handsome and most interesting book need no introduction to the readers of Architecture or to any one who has followed the keen contemporary interest in all things Spanish. They know Spain as few can know it and write with knowledge and authority. We have had a number of books within recent years and no doubt we shall have more, for Spain is becoming more and more a lure for the modern traveller in spite of the inevitable discomforts that any travel off the beaten track there entails.

Picturesque beyond words is the general comment of all who visit the land of Don Quixote, and for the artist and the architect it is a land of wonderful richness and vivid impressions. The illustrations of this volume include a wide range of subjects with a number of measured drawings.

"Spanish friends conversant with modern American domestic work in California and Florida have remarked that nothing quite so intensely Spanish can be found in the mother country. This is true. Spanish dwellings are reserved in character like their occupants; those of the New World, expansive. True, Spain has known certain architectural effervescences—the decadence of Gothic, the ornateness of Plateresque, the voluptuousness of Baroque. But these levities have had but little effect on the Spanish house; the Andalusian cortijo has remained the same simple white-washed structure since the missionaries carried the type to America; the Catalan farmhouse has remained tenaciously Gothic for centuries; and the Mudejar house (mixed Moorish and Christian), perhaps the most distinctive of all, has changed little since the Moors were expelled. In short, the Spaniard in his house and his manner of living is a cautious traditionalist. To him, changes of style were purely political and concerned public buildings."

Webster Hall, Detroit

Halpin & Jewell, Architects

THE building occupies a commanding site at the intersection of Cass and Putnam Avenues. It overlooks the new Civic Art Centre, and is close to the College of the City of Detroit. The main entrance has been placed on Putnam Avenue, facing the Art Centre development, and the Cass Avenue side of the ground floor has been devoted to shops, in accord with the commercial tendency of that thoroughfare. Inasmuch as the building is to be more of a club than a transient hotel, every effort has been made to avoid the ornate form of treatment usually associated with the hotel and to conserve the club atmosphere, and emphasize certain homelike features suggestive of permanent residence.

Beautiful wrought-iron doors open directly into the foyer from the entrance on Putnam Avenue.

The foyer is the most formal room in the building; it has a slate floor and a richly painted beamed ceiling; the walls are hung with tapestries, the furniture is in the early Italian period, and the fixtures are of wrought-iron. The general effect is that of a mediæval baronial hall.

Directly opposite the entrance is a vaulted passage to the main dining-room. This room seats over three hundred persons. It has a panelled wainscot of wood, damask patterned walls, and is lighted by leaded windows of cathedral glass. This dining-room is so arranged that service can be in either cafeteria or hotel style. In addition to the main dining-room, there are two private dining-rooms, which can be opened together to form a banquet-hall.

Reading-room.

On the right of the foyer is the lounge. This is not the main lounge or living-room, but is a public reception-room for men, and just across the hall from it are the registration-desk and the administrative offices, which have been made as inconspicuous as possible in order not to detract from the club aspect. On the left of the foyer on Putnam Avenue is the women's lounge, which has been treated in a lighter vein, with painted woodwork and Pompeiian decorations and furniture. Back of the women's room, and opening from the foyer, is the elevator-hall with its four passenger-elevators. Beyond the women's room, on Putnam Avenue, is a reading-room, with magazine and newspaper racks.

Lounge.

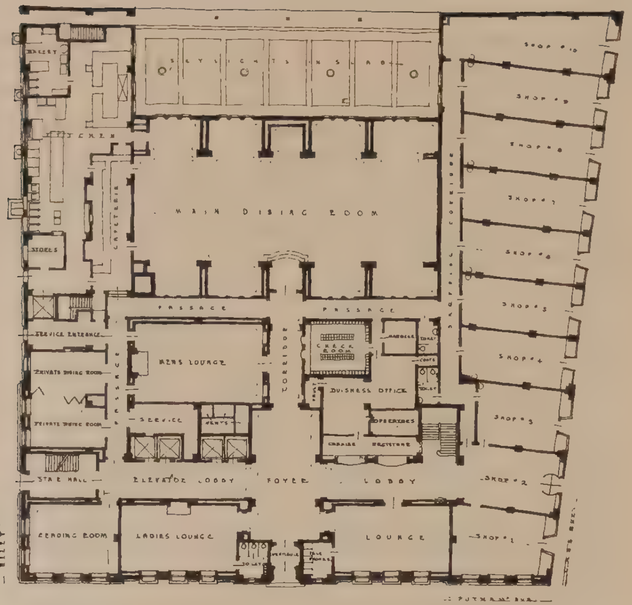
The shops on Cass Avenue may be reached from within the building by means of a shopping-corridor behind the stores. There is also an entrance to the lobby from Cass Avenue.

Behind the elevator-hall is the main lounge. Since this is the social centre of the hotel, a homelike place of masculine comfort has been created. The walls are panelled in wood, the ceiling is beamed and painted in the Italian Renaissance manner, and the floor is agreeably carpeted. There are many easy chairs and reading-lamps placed about. There is also in one end a fireplace of large proportions, which can accommodate a real Yule log.

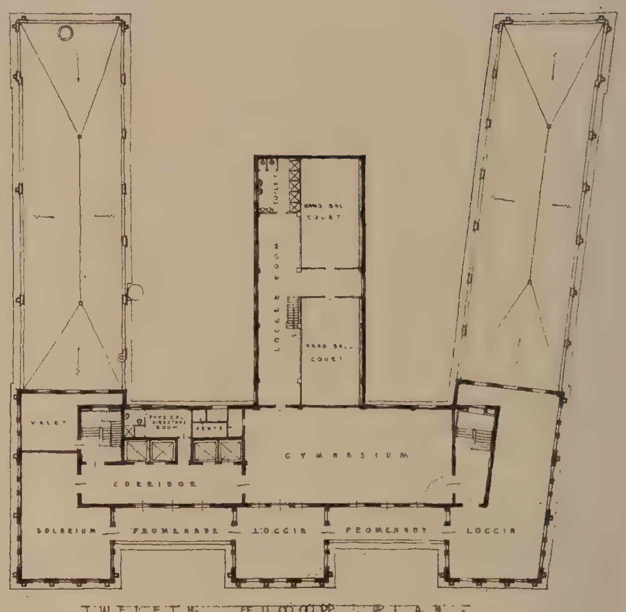
In the basement there are several additional club facilities—card-room, library, billiard-room, and, last but not least, the swimming-pool and showers. Also located near the swimming-pool will be a fully equipped Turkish bath with private dressing-rooms, exercise-rooms, rubbing-slabs, electric cabinet baths, steam-rooms, and large rest-rooms and baths of various kinds.

The pool is standard in every respect, to meet the requirements of intercollegiate swimming events, and every

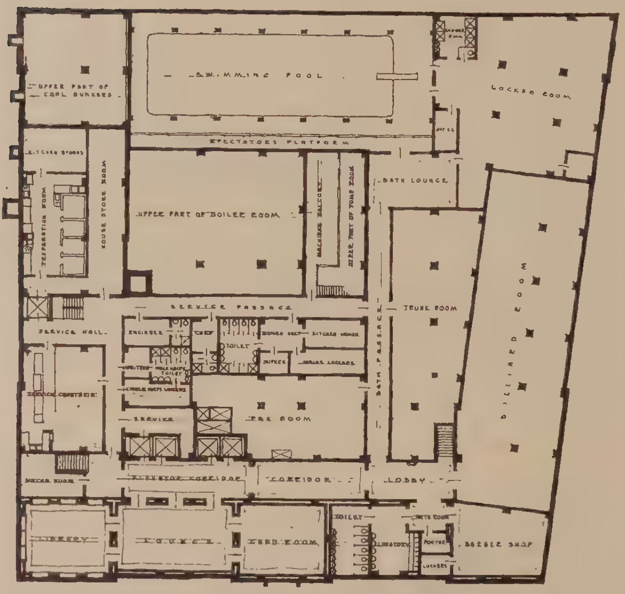
Swimming-pool.



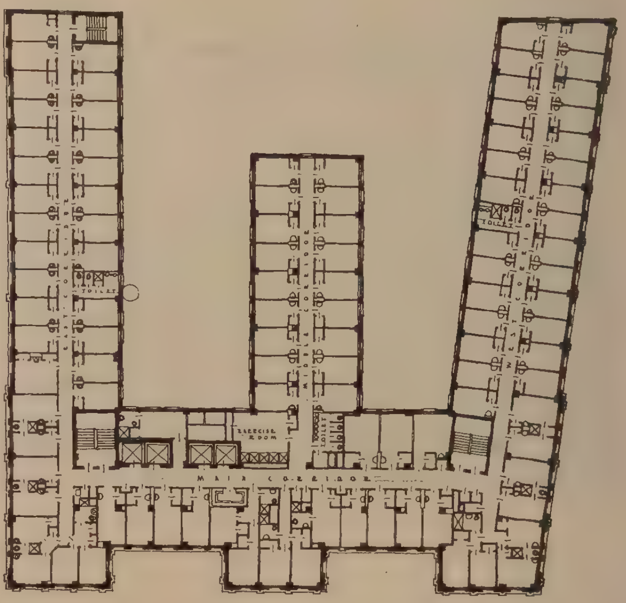
FIRST FLOOR PLAN.



TWELFTH FLOOR PLAN.



BASEMENT PLAN.

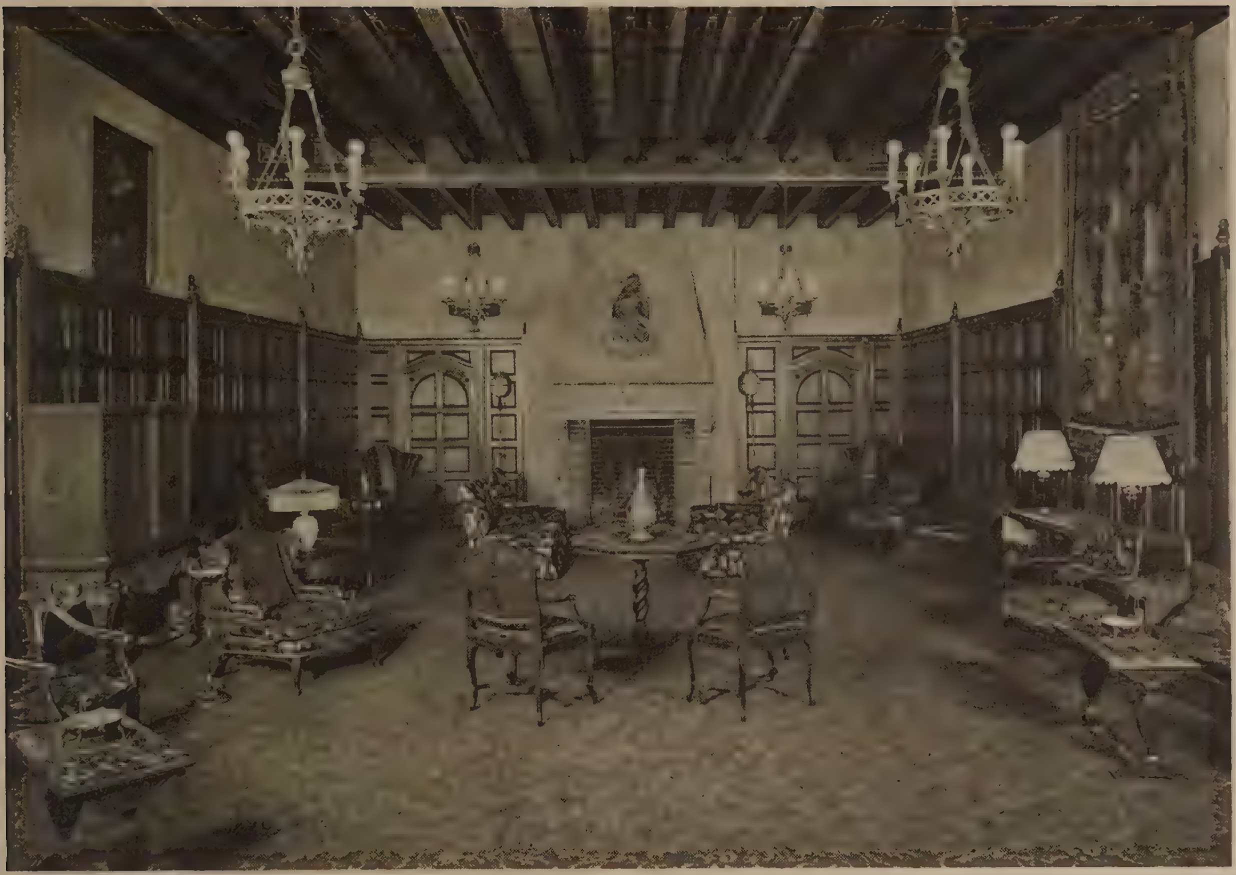


THIRD FLOOR PLAN - TYPICAL FOR 4TH · 5TH · 6TH · & 7TH ·

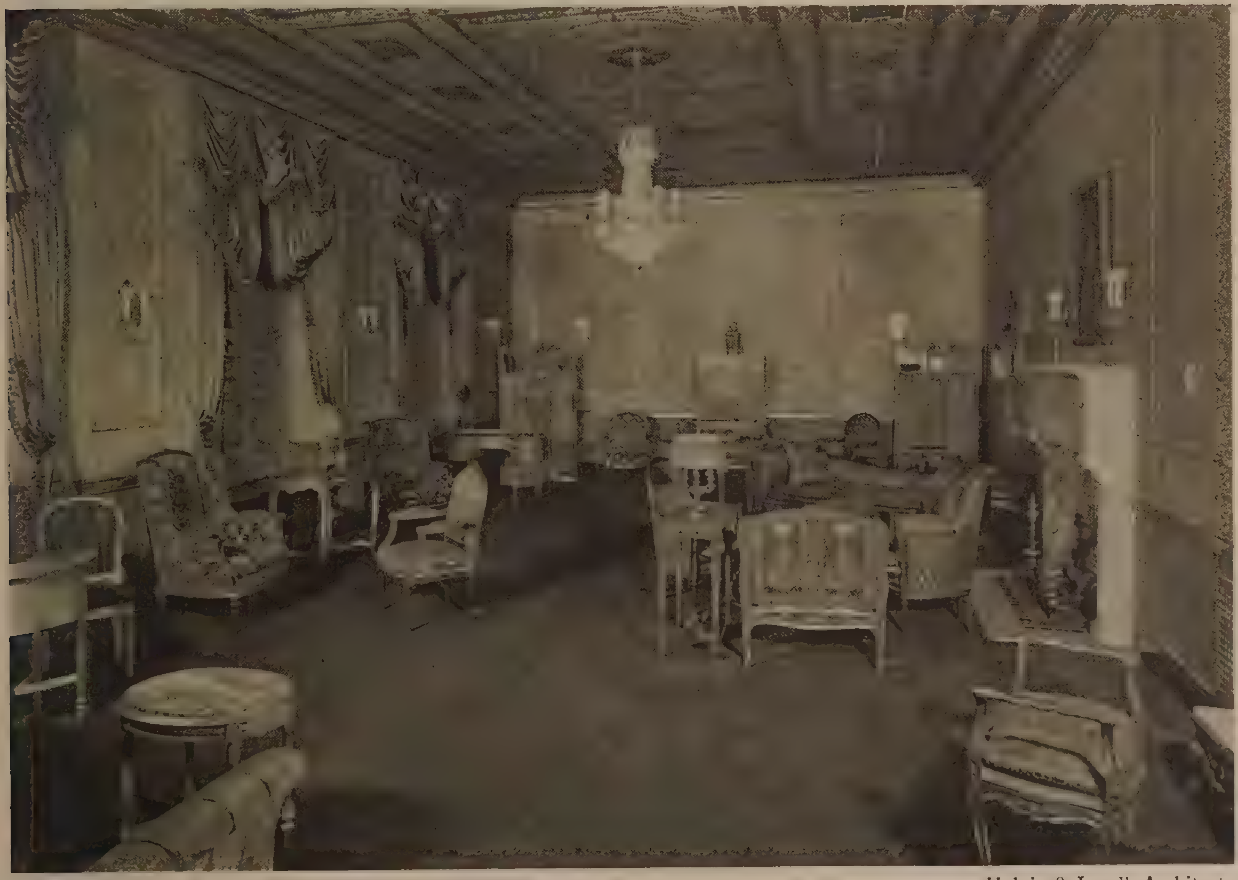
care has been taken to make it sanitary, according to the most modern ideas. The tiles that have been used are beautiful and unique, and an unusual effect of natural lighting has been obtained by roofing the entire pool with glass. The basement and sub-basement contain the usual mechanical equipment, service aids, and comforts for the employees.

Above the ground floor are ten floors of bedrooms. The typical plan contains small but complete rooms, some of which share baths and toilets with adjoining rooms, while the rest use those located on the corridors in small convenient groups. Each room has its own lavatory, and in the public groups the toilet and bath facilities are separated. On each floor there is an exercise-room, with weight- and rowing-machines, etc. On the second floor are handball courts, and on the twelfth are the gymnasium, the sun-room, and open loggias, which provide a pleasant place for loitering on hot summer evenings.

The building is not only modern in construction and in all its interior appointments but its outer walls of brick show a fine harmony of color. There is the combination of gunmetal, rose, buff, and gray so blended that an Oriental richness of color effect is presented.



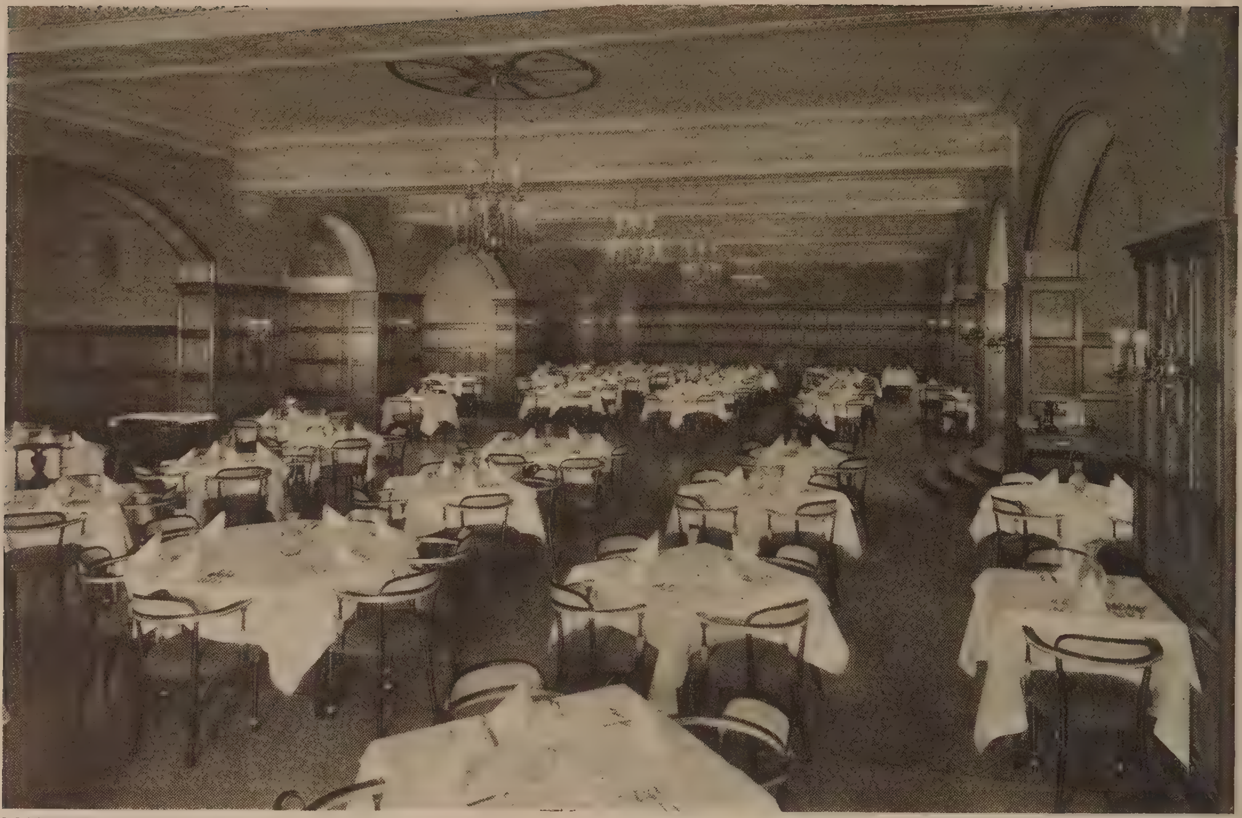
MEN'S LOUNGE.



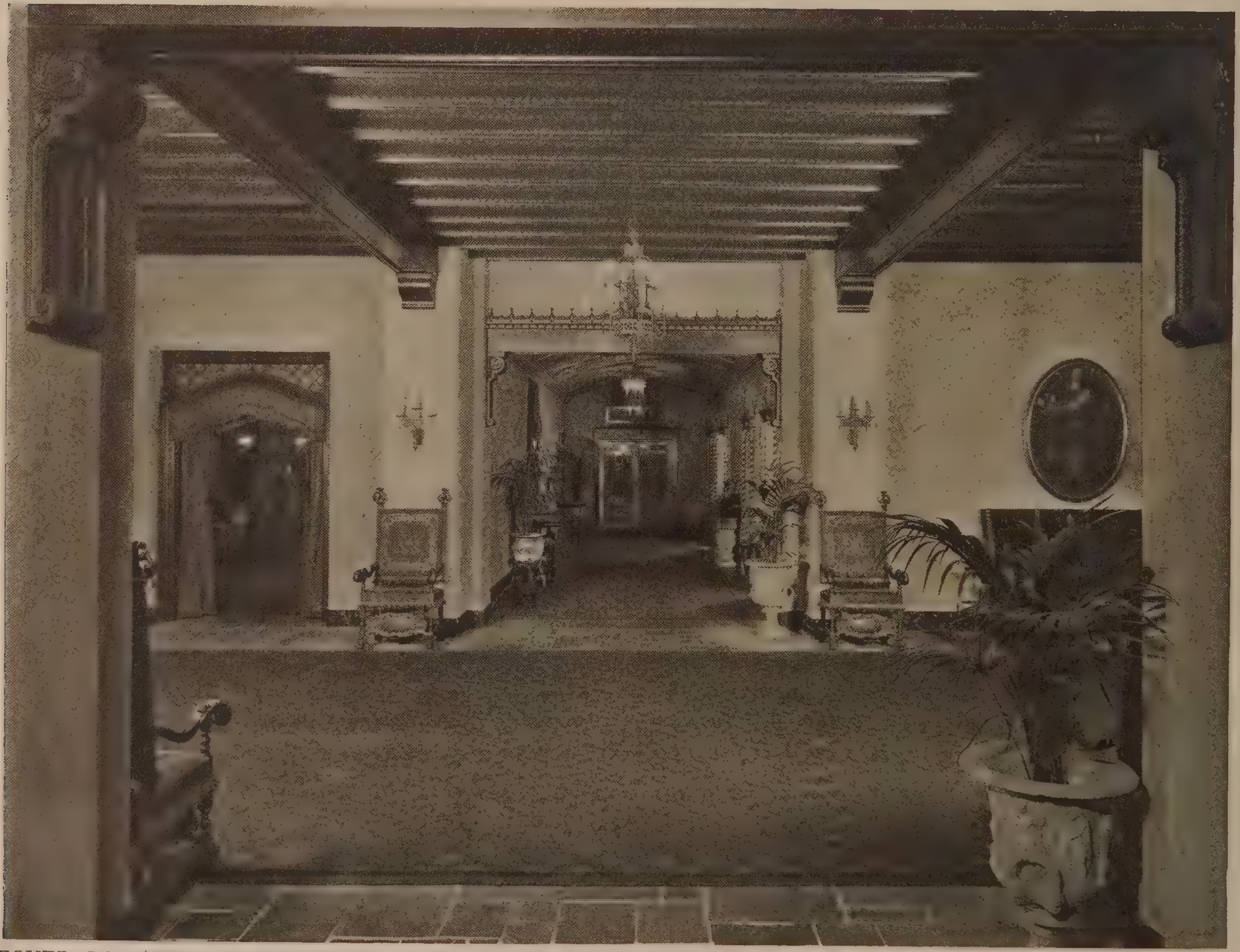
LADIES' LOUNGE.

Halpin & Jewell, Architects.

WEBSTER HALL, DETROIT, MICH.



MAIN DINING–ROOM.



FOYER, LOOKING EAST TO LADIES' LOUNGE AND ELEVATOR LOBBY.

Halpin & Jewell, Architects.

WEBSTER HALL, DETROIT, MICH.

Announcements

Wins Le Brun Scholarship

CLARENCE W. HUNT, a graduate of the department of architecture at Carnegie Institute of Technology, has won the 1925 Le Brun Travelling Scholarship, a yearly award of $1,400 to be devoted to at least six months' study in Europe, according to announcement of the final judgment conducted by a New York jury in the latter part of March.

The scholarship, established by Pierre Le Brun, and awarded under the direction of the New York Chapter of the American Institute of Architects, is offered to any architectural draftsman or architect between the ages of twenty-three and thirty who is a resident of the United States.

This is the second time in three years that a Carnegie Tech man has won the Le Brun prize; Paul F. Simpson, a graduate of the Pittsburgh institution in 1921, winning the award in 1923.

The subject of this year's competition was a municipal building for a town of at least 150,000 population, having room for all the city officials, including a city court and auditorium for public functions. First mention was given Will Rice Amon, of New York City; second mention to Charles H. Dornbusch, of Princeton, N. J.; third mention to Louis Skidmore, of Boston.

Henry A. Cook and Stanley W. Hahn, of New York City; Raymond J. Percival, of Hartford; and George N. Pauly, of Hamburg, N. Y., and Charles W. Stotz, of Pittsburgh, both Carnegie Tech men, were commended for their contributions.

The winning drawings and those receiving honorable mention were shown at the architectural and allied arts exposition at Grand Central Palace in New York.

Practical Teaching of Civic Knowledge

TINY Town is the Springfield, Missouri, idea for instructing the youth of its public schools in practical civic knowledge, and was first created at Springfield in June, 1919. It will be repeated on a larger scale and exhibited on a spacious tract at Grant Beach Park, May 25 to June 6, 1925.

In 1919, Tiny Town was exhibited on the floor of Springfield's Convention Hall on a scale of ½-inch to the foot, and, comprising one thousand models built entirely by school children, attracted national attention. The miniature city will be reproduced in 1925 on the scale of 1-inch to the foot, covering as much area of open ground as is needed to create every feature of a modern model city, carefully designed and planned so as to include parks, boulevards, segregated factory and business districts, restricted residence sections, proper electric lighting and landscaping. All structures will be painted or water-proofed.

Tiny Town will be managed by officials elected from the student body of Springfield's public schools, who will formulate ordinances and departments for policing, protecting, and sanitating a model city. Accompanying the preparation of Tiny Town and continuing through its construction will be various contests, and hundreds of cash and valuable prizes awarded. These contests will involve every student from the lowest to the highest grades, so that all may in some manner participate. Construction will be confined to grades above the sixth. Students not entering manual training will engage in interior decorating, furniture and wall-paper designing, landscaping, posters, advertising, cut-out books, modelling, and kindred work.

Bronze and Brass

SUPPLEMENTING Mr. Emerson's recent article we have received the following interesting additional facts from the metallurgist of the Bridgeport Brass Company:

"The article entitled 'Bronze and Brass,' by Mr. David B. Emerson, which appeared in ARCHITECTURE for February, 1925, is particularly interesting to us because it shows what different meanings the terms brass and bronze have to an architect and to manufacturers like ourselves. For instance, as stated in the second paragraph of the article, the name bronze means to an architect an alloy made up of not less than 90 per cent of copper, 7 per cent tin, and the remainder zinc. To a manufacturer of wrought brass and bronze the term bronze means either a straight copper-tin alloy containing up to 10 per cent of tin, the remainder copper, with perhaps a small percentage of phosphorus; or some copper-zinc mixture with perhaps some tin added which has a red color, such as commercial bronze, which contains about 90 per cent copper and about 10 per cent zinc, with or without about .5 per cent tin. We speak of some so-called bronzes which neither are straight copper-tin alloys nor have a red color; for instance, naval bronze, which contains 60 per cent copper, .75 per cent tin, and the remainder zinc.

"It is stated that brass is an alloy of copper and zinc having a copper content of from 50 to 60 per cent. A great many structural and ornamental extruded shapes contain only 50 to 60 per cent copper but with the exception of hot forging-rod, which contains about 59 per cent copper, practically all brasses contain 60 per cent and over. Brass pipe contains about 60 per cent, as does also brass rod. Wrought brass for lighting fixtures, bathroom supplies, etc., contains about 66 per cent copper. Cartridge brass contains about 70 per cent, etc. Red brass, which is used for cast valves, faucets, traps, etc., contains about 85 per cent copper, 5 per cent zinc, 5 per cent lead, and 5 per cent tin. These examples show the extent to which the meanings of the words brass and bronze vary."

Correction

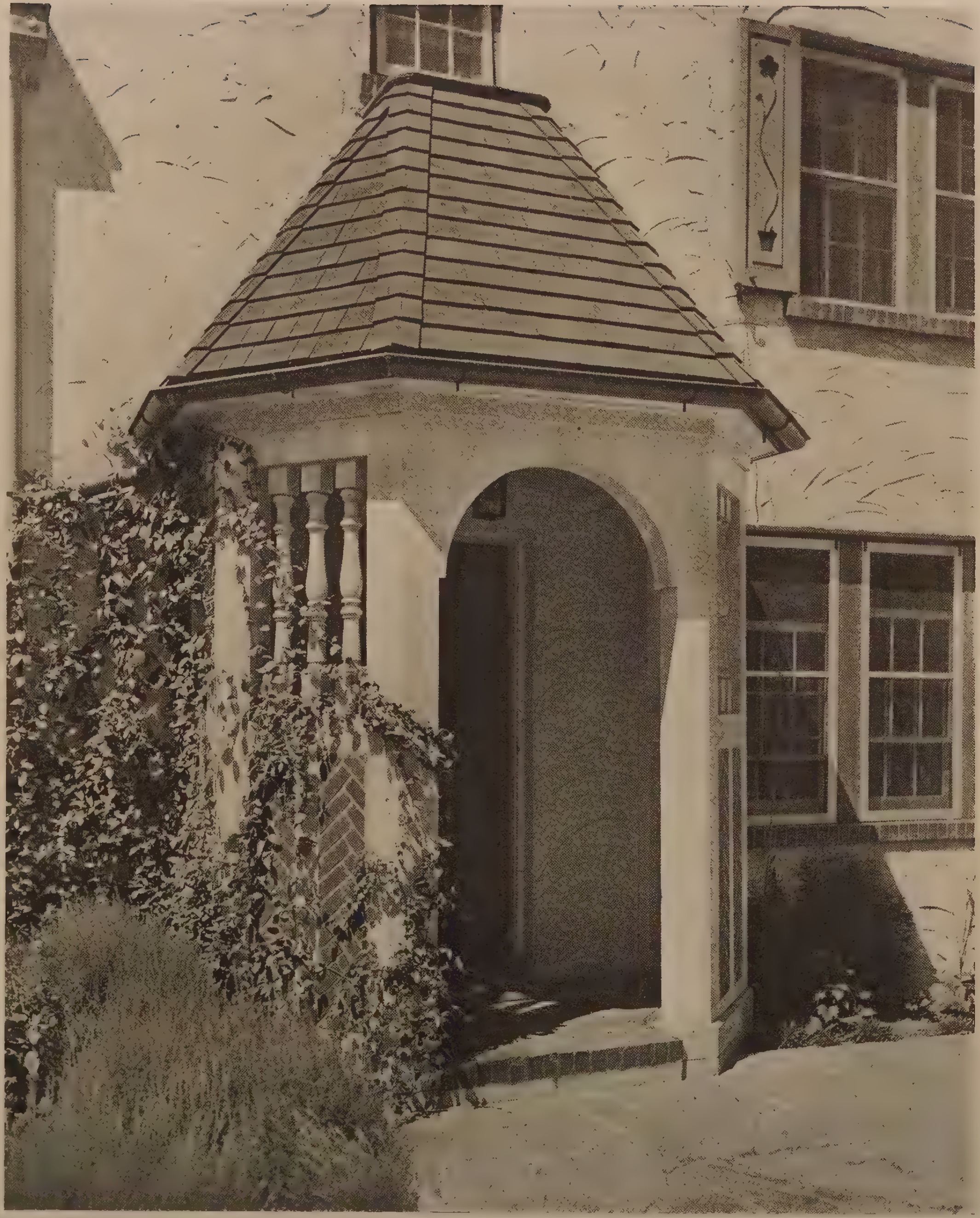
In Mr. Emerson's article on "Bronze and Brass" in the February number, the word "colored" was omitted from the paragraph beginning: "Bronze should never be used where any amount of wear is liable to occur." It should have read: "Colored bronze," etc.

Hard Lead

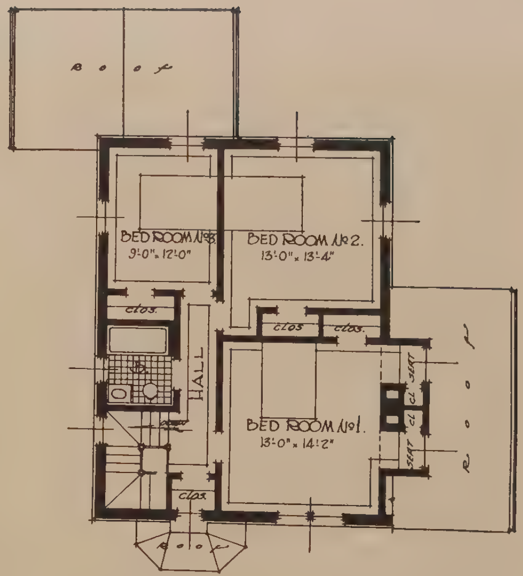
WE are advised by the National Lead Co. that hard lead, or Hoyt Hardlead, is a product of the United Lead Company, one of their subsidiaries, and that it is being specified regularly by many prominent architects for roofs, gutters, flashings, leaders, leader-heads, spandrels, and ornamental metal work on their important jobs. A few major Hoyt Hardlead installations are listed below:

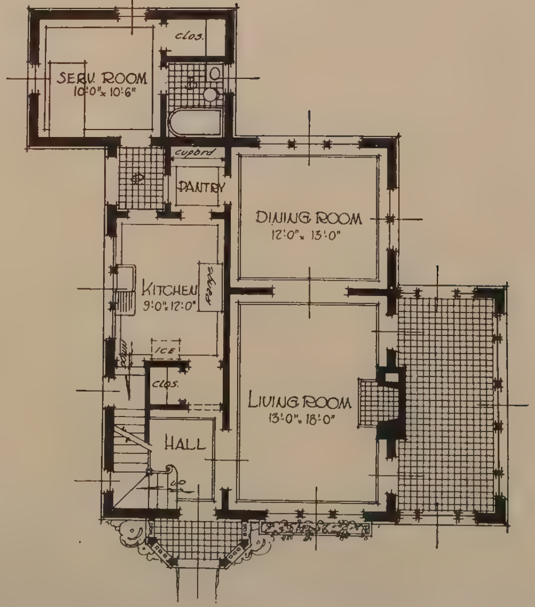
Tribune Tower Building, Chicago, Ill.; Sacred Heart Church, Jersey City, N. J.; Marshall Field Estate, Huntington, Long Island, N. Y.; University of Michigan, Ann Arbor, Mich.; Thomas W. Lamont's residence, New York, N. Y.; Cotton Exchange, New York, N. Y.; Chamber of Commerce Building, Washington, D. C.; Electric Storage Battery Company's plant, Philadelphia, Pa.; Longue Vue Club, Pittsburgh, Pa.; Dennison University, Granville, Ohio; West Virginia State Capitol, Charleston, W. Va.

Hard lead was used on the spire of the First Presbyterian Church, Utica, N. Y., recently featured in ARCHITECTURE.

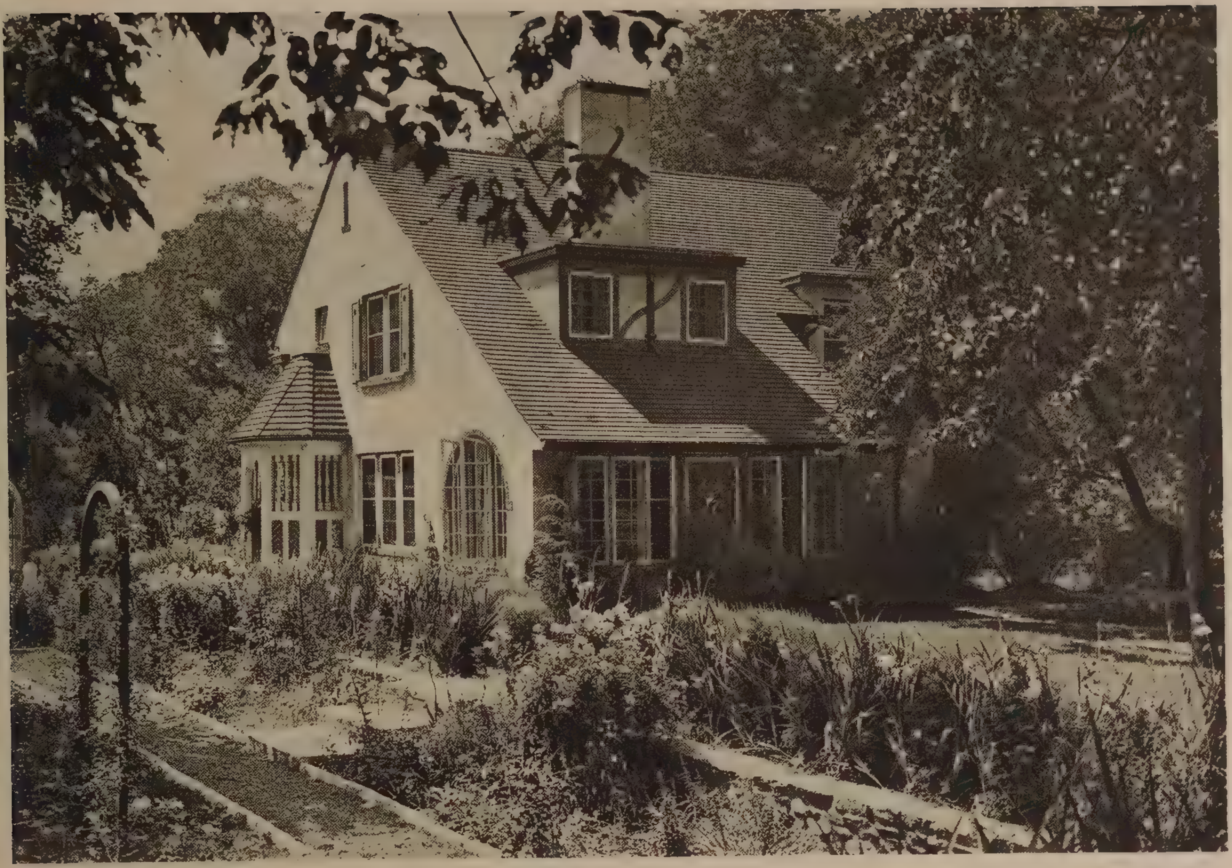


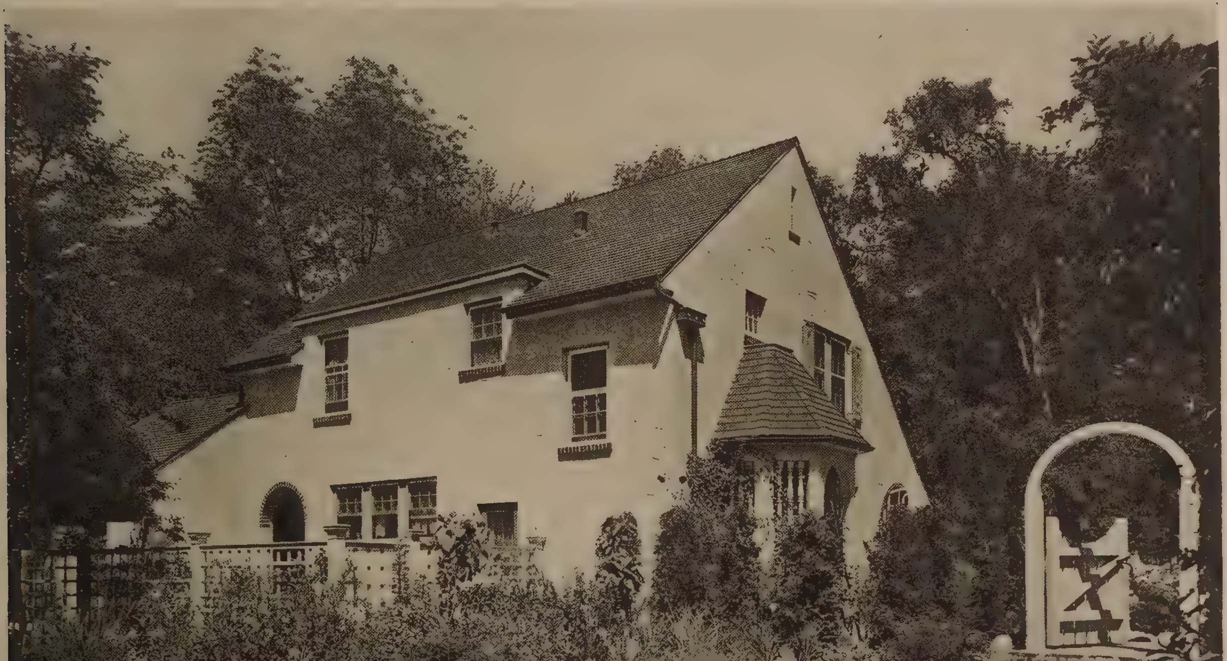
ENTRANCE PORCH, RESIDENCE, E. B. POWER, BRONXVILLE, N. Y.



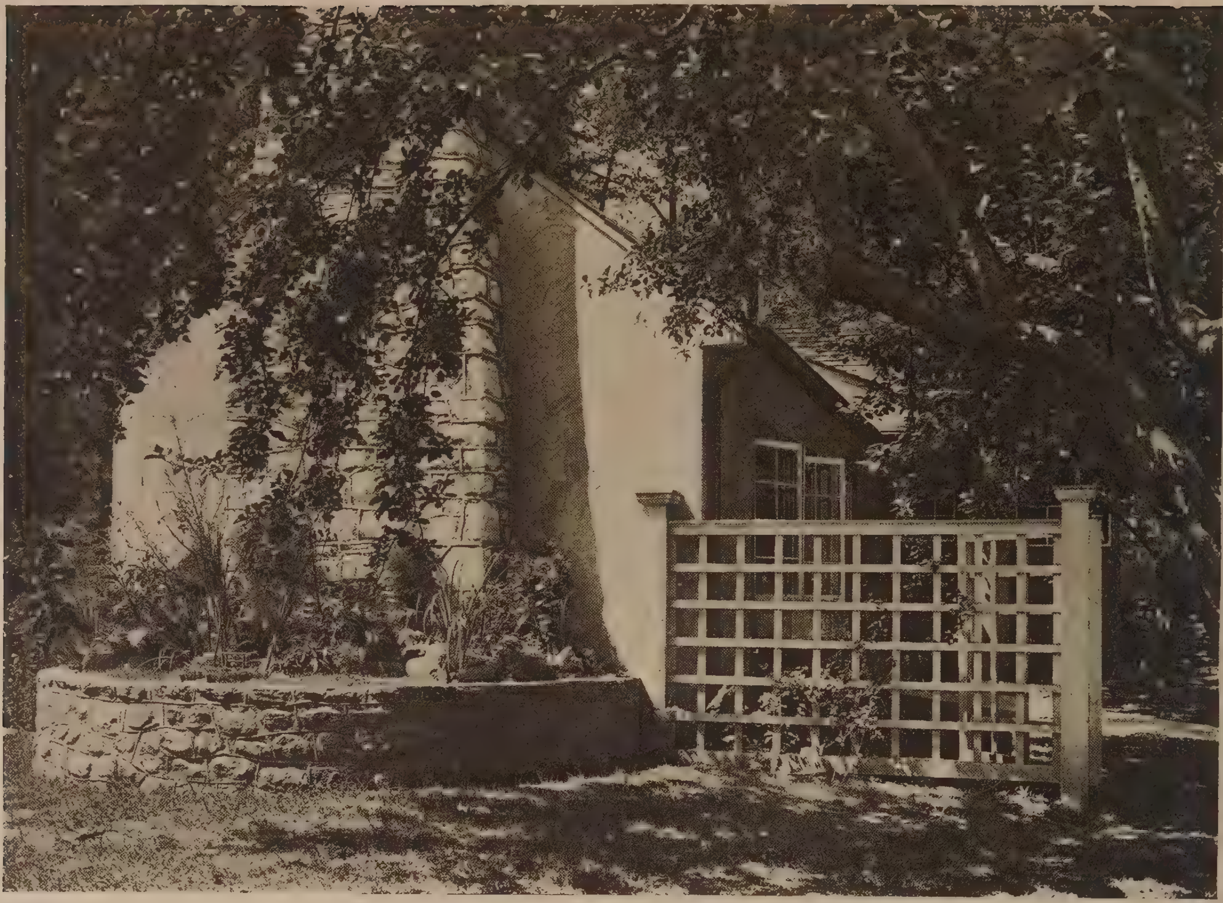


R. C. Hunter & Bro., Architects.

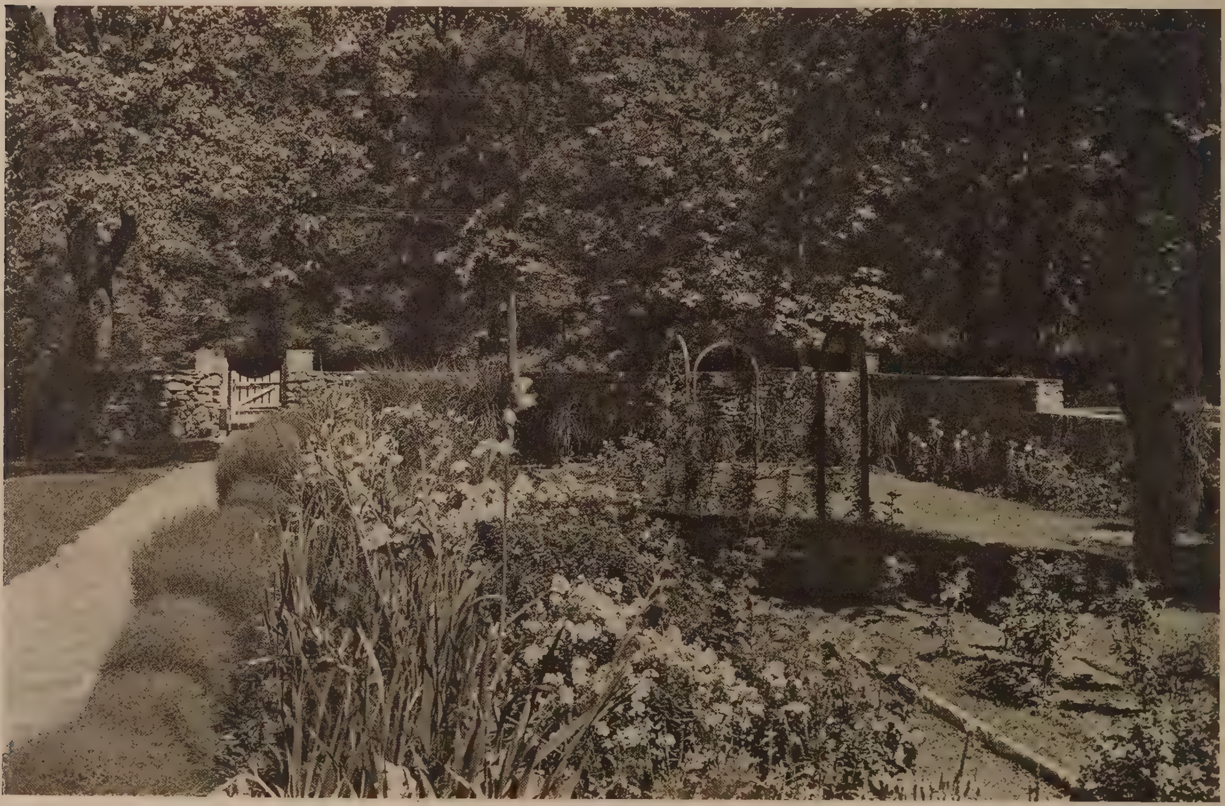




RESIDENCE, E. B. POWER, BRONXVILLE, N. Y. R. C. Hunter & Bro., Architects.



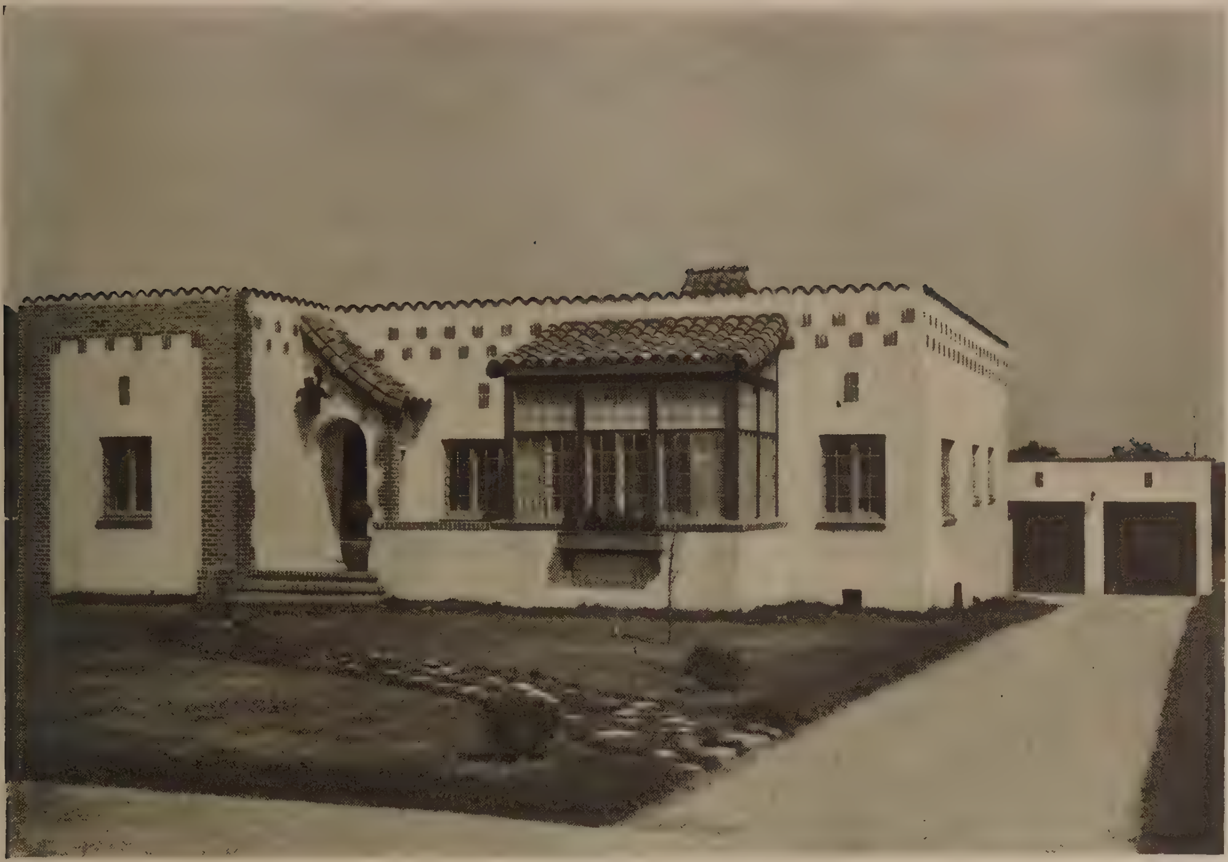
STUDIO–GARAGE IN OLD APPLE ORCHARD.

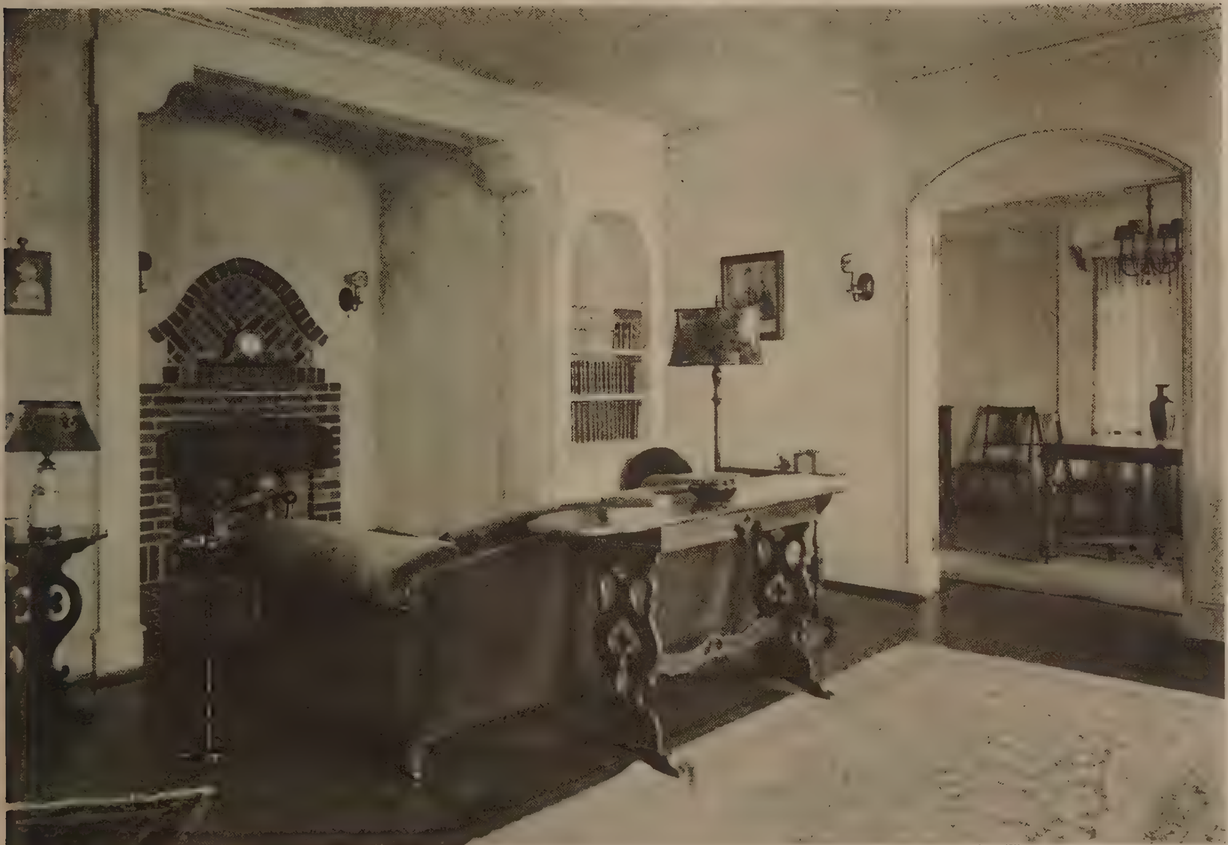


GENERAL VIEW OF GARDEN INCLOSED BY STONE WALL.

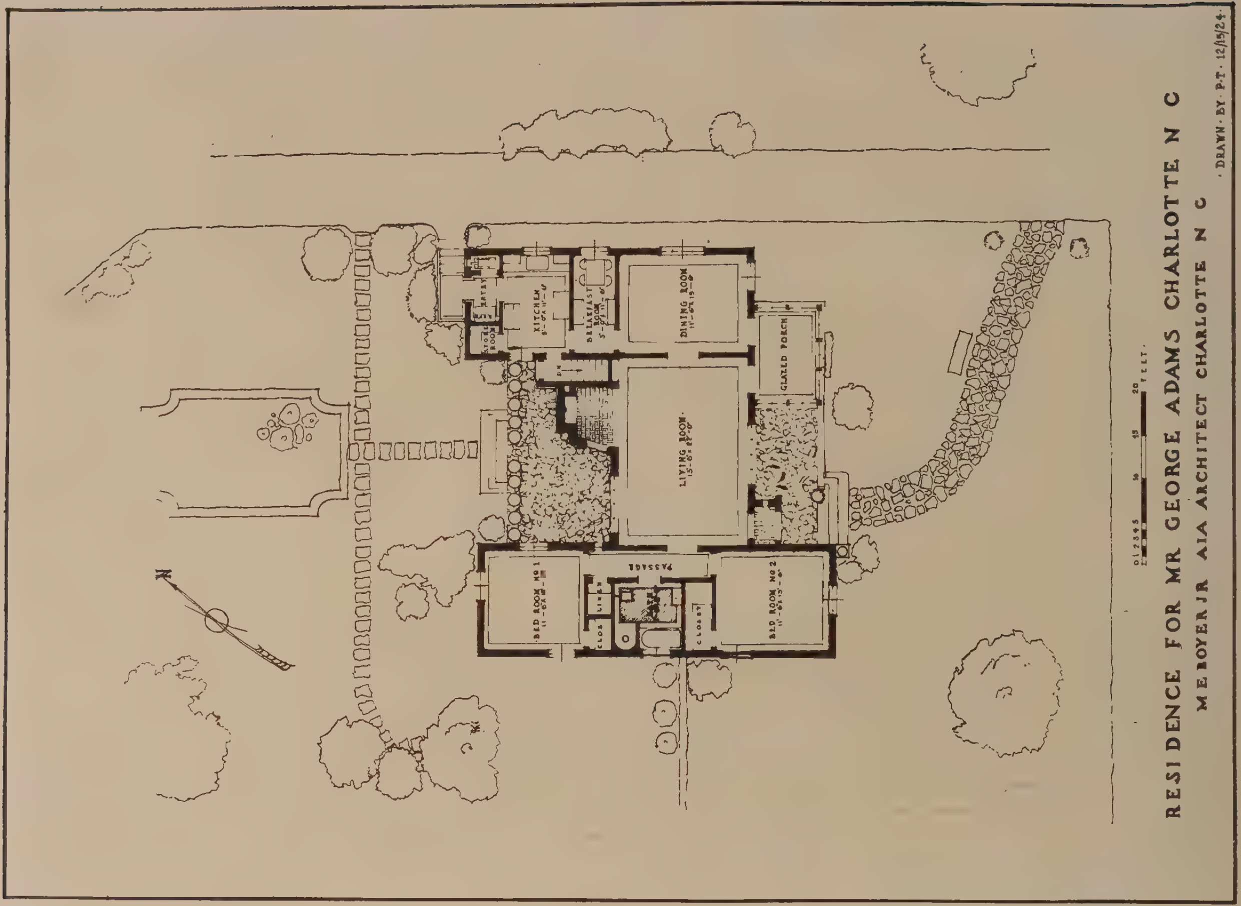
R. C. Hunter & Bro., Architects.

RESIDENCE, E. B. POWER, BRONXVILLE, N. Y.

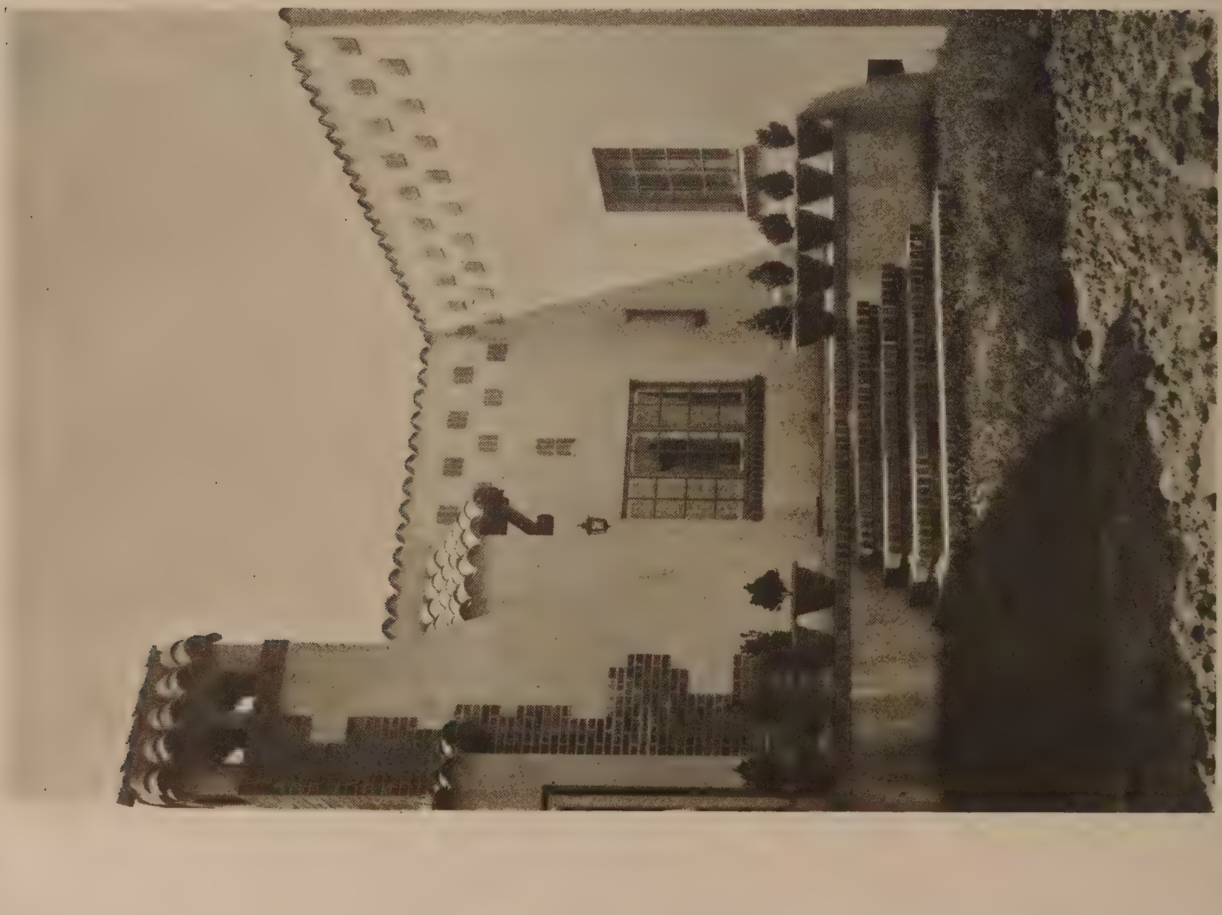


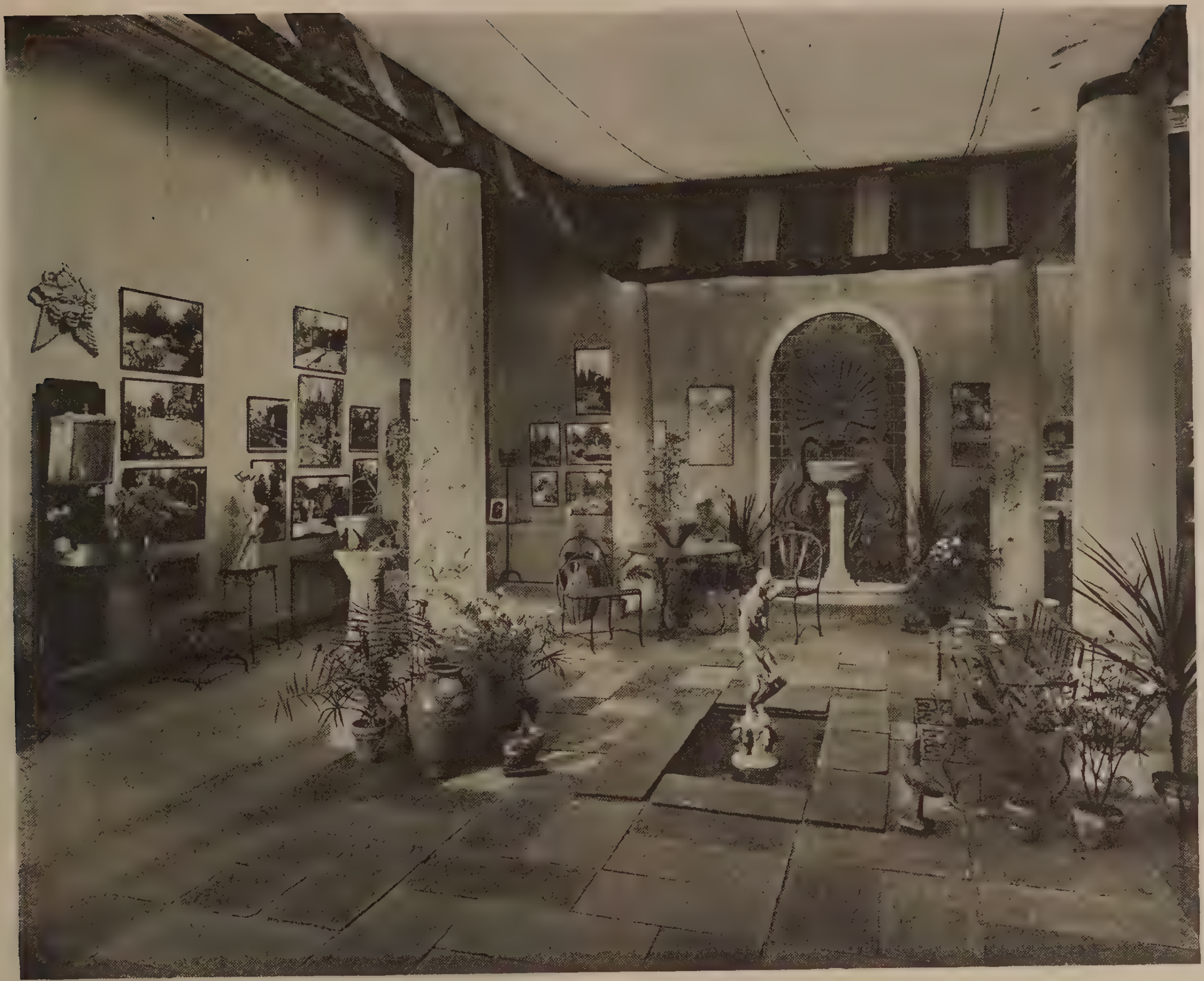


LIVING–ROOM, RESIDENCE, GEORGE ADAMS, CHARLOTTE, N. C. M. E. Boyer, Jr., Architect.

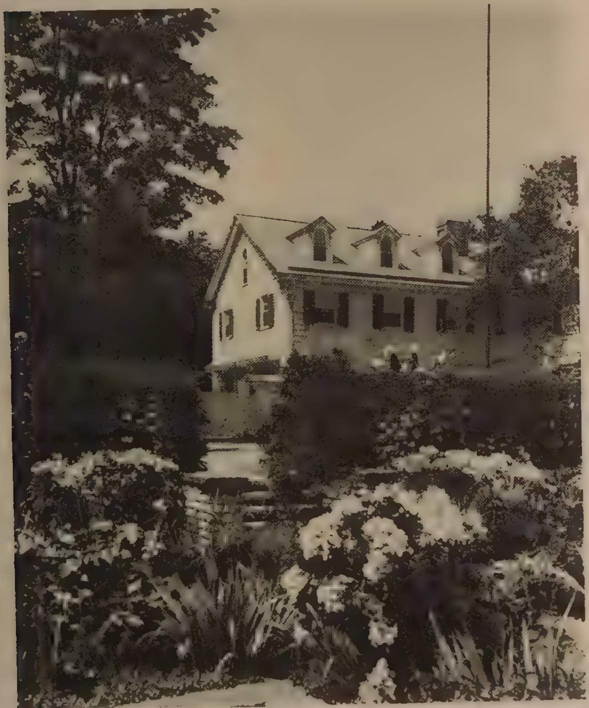


RESIDENCE FOR MR GEORGE ADAMS CHARLOTTE N C
M E BOYER JR AIA ARCHITECT CHARLOTTE N C
· DRAWN · BY · P.T. · 12/15/24 ·

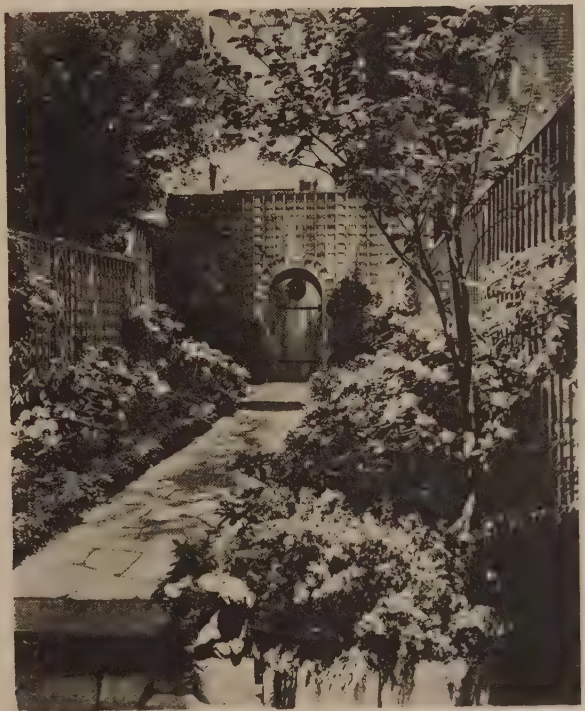




Court and Fountain, Arden Studios.

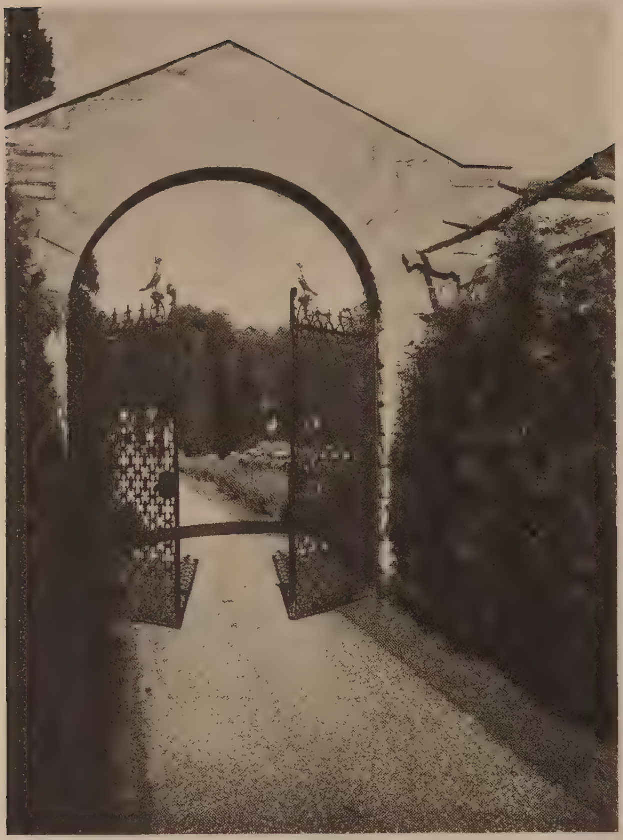


Garden, Chester C. Bolton, South Euclid, Ohio. Prentice Sanger, Landscape Architect.

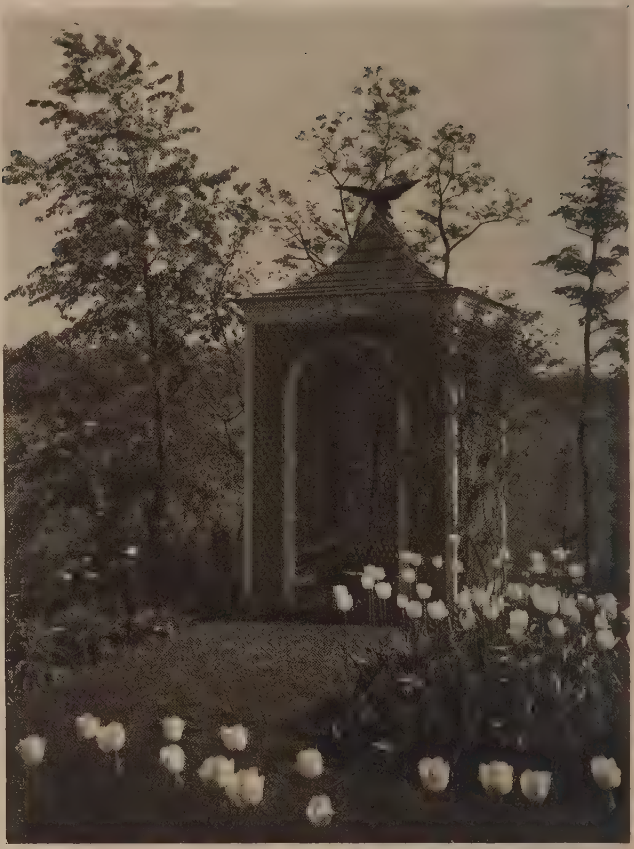


Garden, Mrs. Nathaniel J. Hess, New York City. Annette Hoyt Flanders, Landscape Architect.

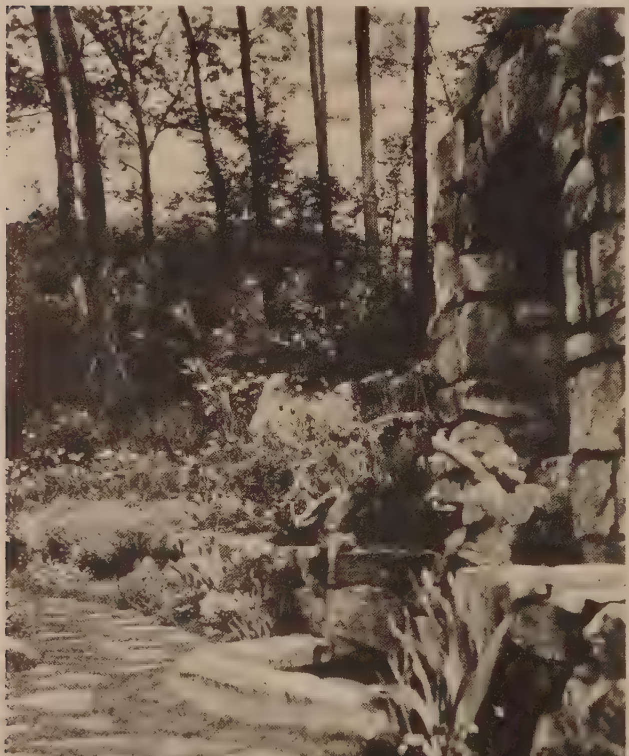
EXHIBITION, NEW YORK CHAPTER AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.



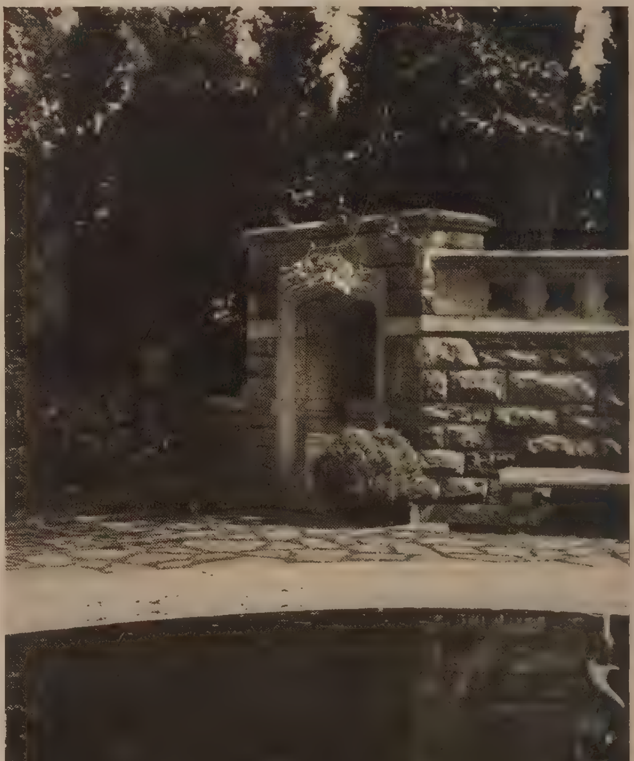
Blue jay gate in garden, C. M. Schwab, Loretto, Pa. C. W. Leavitt, Architect.



Garden house, estate Mrs. Monroe Douglas Robinson, Syosset, Long Island. Ruth Dean, Landscape Architect.



Fountain in wall garden, George Baker, Tuxedo, N. Y. Clarence A. Fowler, Landscape Architect.



Wall niche and pool, James A. Farrell, South Norwalk, Conn. F. Brinckerhoff, Landscape Architect.

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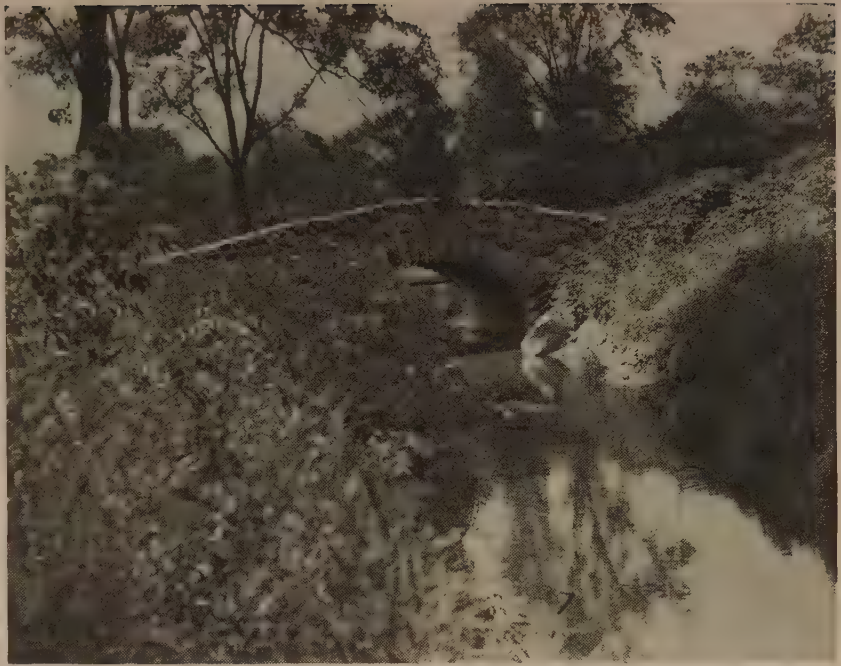
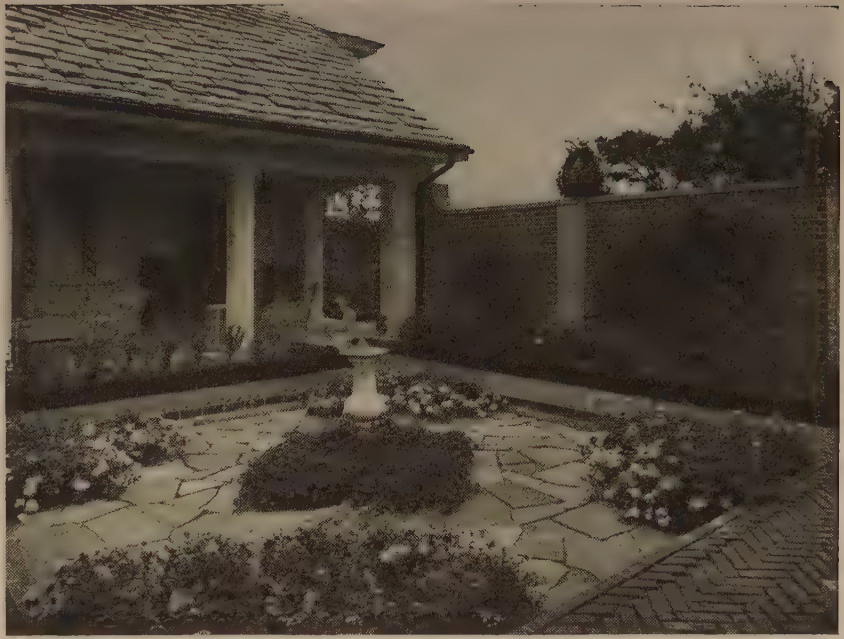
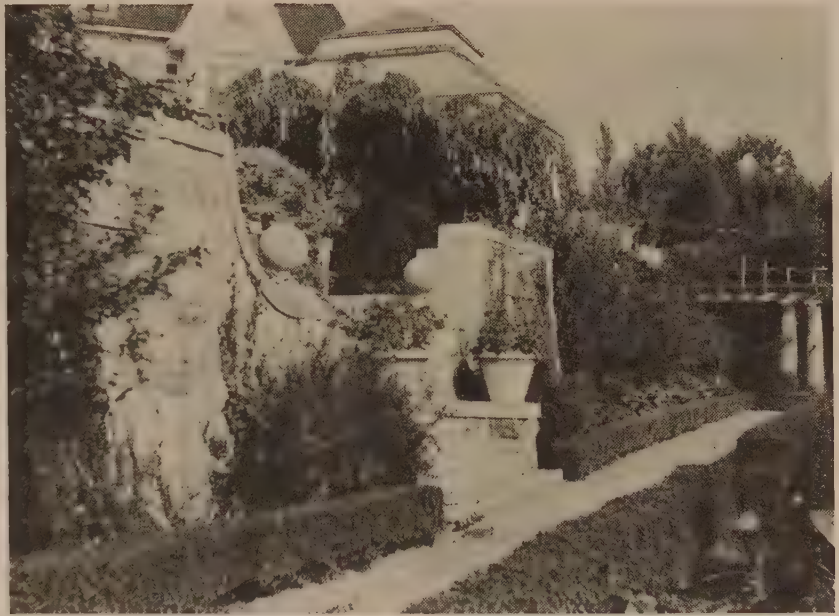


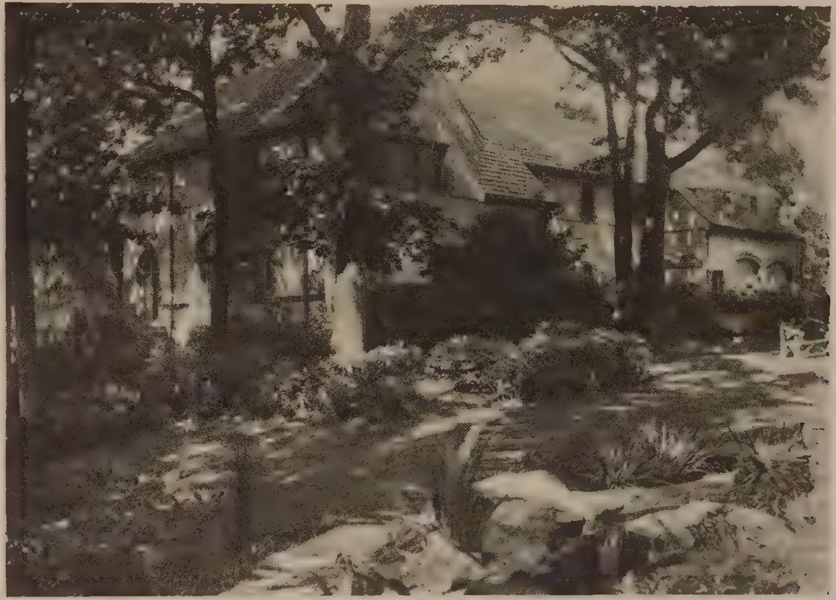
Bridge at White Plains, Bronx River Parkway. Gilmore D. Clarke, Landscape Architect.



Paved garden in connection with house, Charles H. Sabin, Southampton, Long Island. Marian C. Coffin, Landscape Architect.



Steps in garden wall, Douglas Alexander, Stamford, Conn. Brinley & Holbrook, Landscape Architects.



House from water garden, Walter E. Kelly, Riverdale, N. Y. Harold A. Caparn, Landscape Architect.

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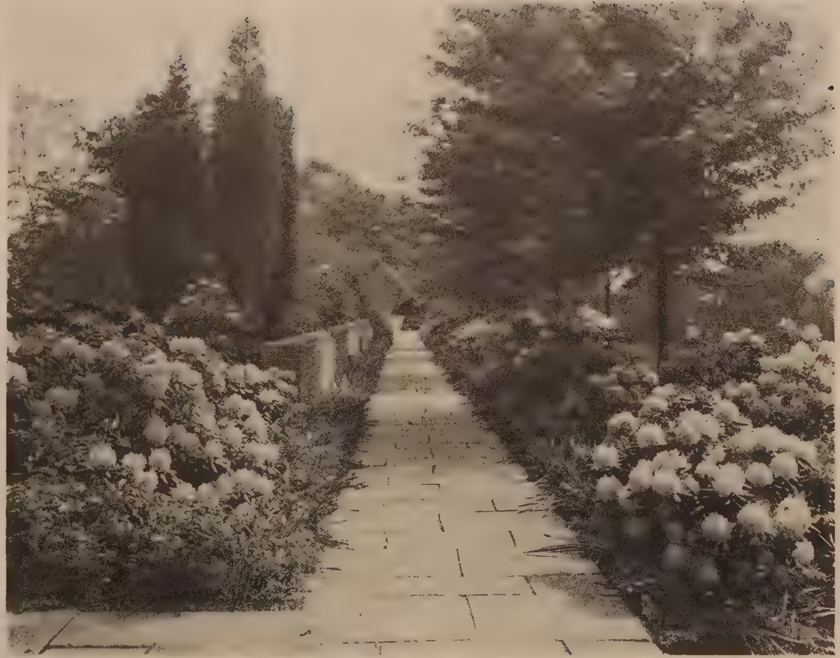
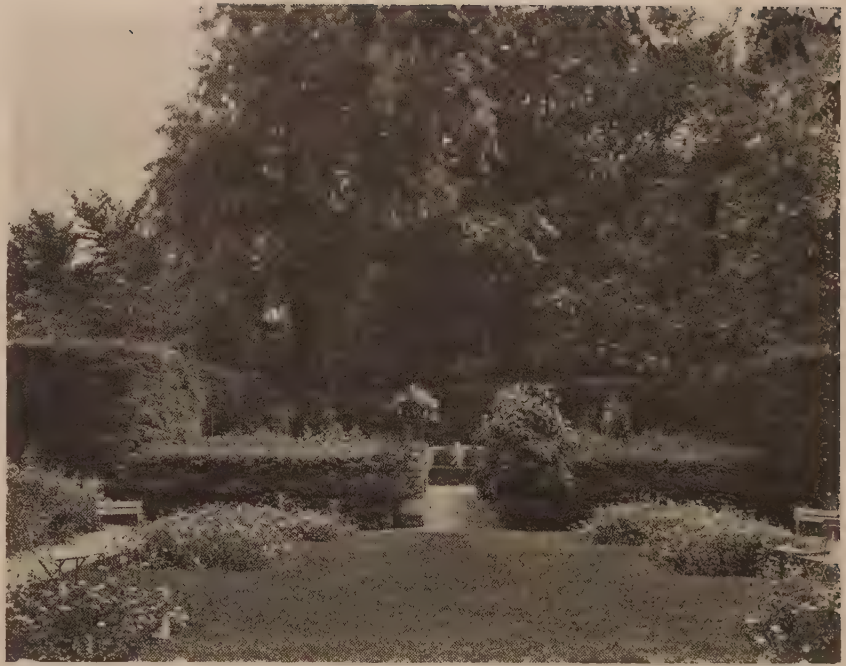
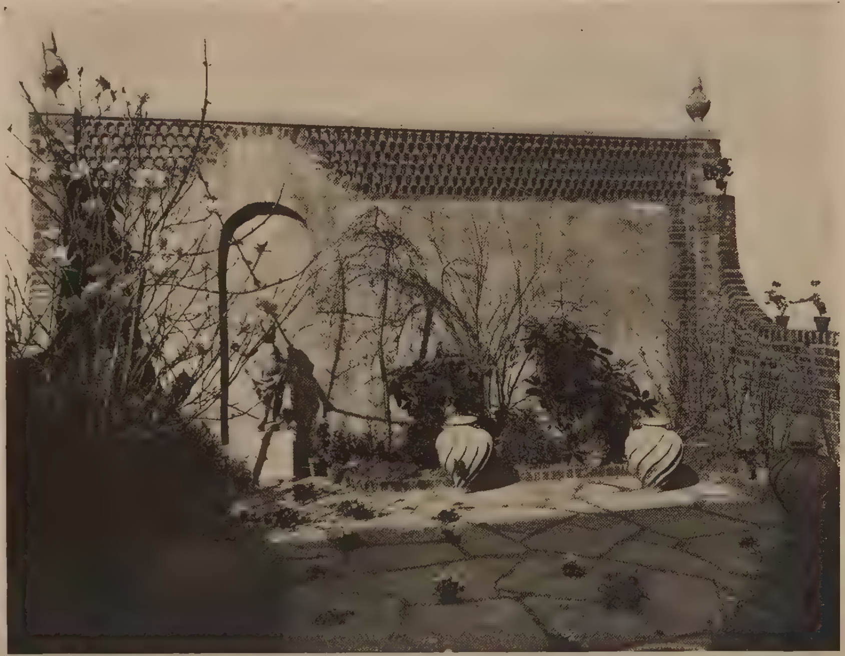


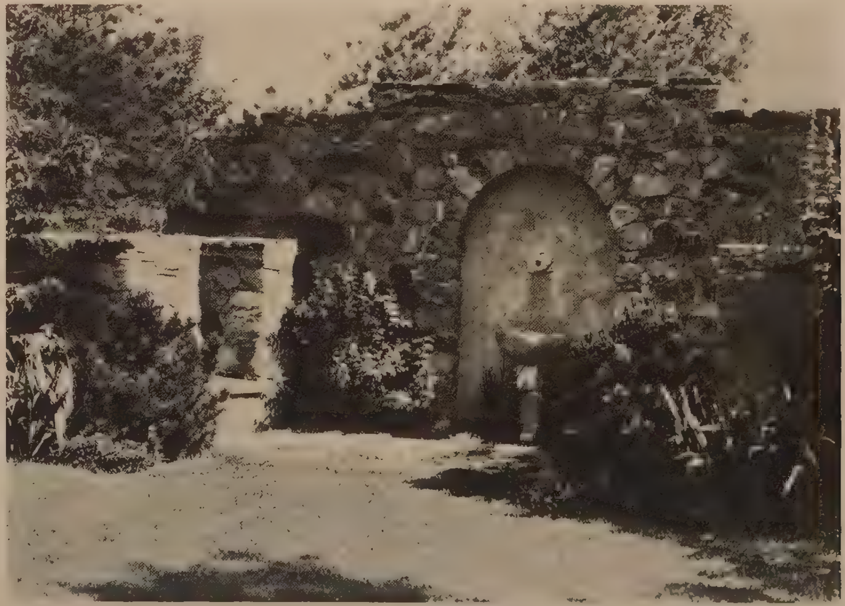
Garden, Harold Lehman, Tarrytown, N. Y. Annette Hoyt Flanders, Landscape Architect.



The Garden of Casagmo, Ridgefield, Conn. Charles Downing Lay, Landscape Architect.



Garden, Misses Martha and Elizabeth White, New York City. Ruth Dean, Landscape Architect.



Wall fountain in a Westchester garden. Robert Ludlow Fowler, Jr., Landscape Architect.

EXHIBITION, NEW YORK CHAPTER AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.

An Architect's Simple Engineering Problems

By DeWitt Clinton Pond

SEVENTH ARTICLE

THE last article was devoted to the definition of moments and to the method used in determining the reactions of the ends of beams by means of them. This is one of the most difficult steps for the beginner, because he is unfamiliar with moments and finds it difficult to calculate in terms of both weight and distance. Actually, the downward pressure at each end of a beam caused by various loads can be determined by proportion. If a 100-pound load is located two-thirds of the space away from one reaction, 66.67 pounds will be carried by the nearest reaction and 33.33 pounds by the one further away. This is plain even without the use of mental arithmetic, and the reasoning behind it is based upon a knowledge of proportion. However, where more complicated loading is encountered, the engineer or architect finds the load at each support by means of moments as outlined in the last article.

The student of engineering is apt to think the calculations complicated. This is not so, and after a little practice it will be plain that there is nothing really difficult or involved in the method. Engineers always use the easiest and quickest methods of arriving at results, and the reader will find that there are very few short-cuts that are not given in these articles.

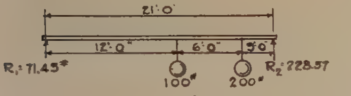


FIGURE 13

After he has mastered the method of finding reactions by means of moments, the next step in the design of the beam is the determination of the tendency to bend it, due to the upward pressure at the reactions and the downward pressure of the loads. In determining this tendency, *all* the forces acting on the beam must be taken into account. When there is a tendency toward bending at a point to be found, the only forces that must be considered are those that act at a distance from the point under consideration, for a force acting directly against a point can produce no bending at all—only crushing.

If the condition shown in Fig. 13 is considered, then it is necessary to find what the tendency toward bending is at various points along the beam. As determined in the last article, the reactions are 228.57 pounds and 71.43 pounds at R_2 and R_1 respectively.

Although it is possible at any point to determine the tendency to bend the beam, it is customary to take points where loads are concentrated where conditions are as shown in the figure. If it is desirable to find the tendency toward bending directly under the 100-pound load, then the only forces that must be considered are R_1, at the left; or R_2 and the 200-pound load, at the right. The one load that will have absolutely no tendency to bend the beam at that point is the one that is bearing upon it. The 100-pound load would have a crushing effect only, as stated above.

First: The effect of the load at the left (R_1) will be considered. This acts at a distance of 12 feet away from the point under consideration, and therefore produces a moment of $71.43 \times 12 = 857.16$ foot-pounds.

Second: The effect of the loads at the right will be determined. The reaction—R_2—is upward and acts at a distance of 9 feet away from the point. The *upward* moment produced by the reaction is $228.57 \times 9 = 2057.13$ foot-pounds. However, there is a downward load of 200 pounds also acting at the right of the point, which must be taken into consideration. The distance between the load and the centre of moments is 6 feet, and the downward moment is $200 \times 6 = 1{,}200$ foot-pounds. The total moment caused by the loads at the right of the centre of moment is $2{,}057.13 - 1{,}200 = 857.13$ foot-pounds.

If the moments caused by the loads at right and left of the centre of moments are compared, it will be seen that they are almost equal. They would be equal if the reactions had been determined on the basis of carrying the result four or five places beyond the decimal point. This is never done in practice, however.

It can be seen that here is another method of checking engineering results, and if there is any question with regard to the accuracy of a moment as determined by using the forces at the left of a given point, the moment caused by forces at the right can be determined, and if this, with only a very slight difference, almost equals the first, the result can be known to be correct. It is obvious that there should be no difference in the tendency to bend the beam at the right or left of a given point, as any difference would result in an actual turning — an unstable condition would be produced.

In this manner moments, or tendencies toward bending, can be found for any point in a beam. If it is desirable to find the moment at the point where the 200-pound load acts, then it is necessary to simply multiply R_2 by 3 feet, or $228.57 \times 3 = 685.71$. This can be checked by multiplying R_1 by 18 and subtracting 100 multiplied by 6:

$$\begin{array}{rl} 71.43 \times 18 = 1{,}285.74 & \text{upward moment} \\ -\ 100.00 \times \ \ 6 = \quad 600.00 & \text{downward moment} \\ \hline 685.74 & \end{array}$$

It can be seen that the two moments are almost alike.

In Fig. 15 a more complicated condition is illustrated. Here there are not only concentrated loads, but uniform loads extending over a part of the beam. The reactions were determined in the previous article. R_1 equals 1,712.5 pounds and R_2 equals 1,787.5 pounds. It will be interesting to find the moments at various points along the beam. The following calculations will be lengthy and a little difficult to understand, but the reader should bear in mind that the principles are exactly the same in every case; the upward moment is first found and then all the downward moments are determined and their sum subtracted from the first.

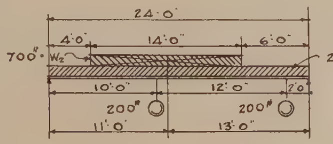


FIGURE 15

The point that will be selected as the centre of moments will be under the 200-pound load 10 feet at the right of R. The upward moment, caused by the reaction, is:

$$1{,}712.5 \times 10 = 17{,}125 \text{ foot-pounds}$$

The downward moments are as listed below:

1,000 × 5 = 5,000 foot-pounds
300 × 3 = 900 " "
5,900 " "

17,125 − 5,900 = 11,225 = M

As a check it will be interesting to determine the moments at the right of the centre of moments:

1,787.5 × 14 = 25,025

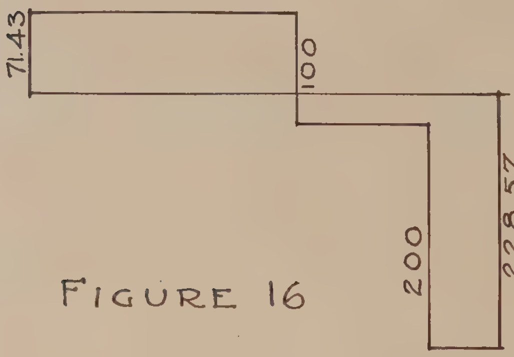


FIGURE 16

The downward moments are caused by the two uniform loads and the one concentrated load:

200 × 12 = 2,400 foot-pounds
1,400 × 7 = 9,800 " "
400 × 4 = 1,600 " "
13,800 " "

25,025 − 13,800 = 11,225 foot-pounds = M

This is an absolute check due to the fact that the reactions were found exactly in the previous article.

It may be difficult for the reader to see how the downward moments are arrived at, but if he remembers that the centre of gravity of that part of the uniform load that extends to the left or right of the centre of moments is located at a distance only one-half as great as that covered by the load, he will see that the moments are found in the usual manner.

It would be useless to keep on finding moments at various moments of the beam, as the process is exactly the same in every case. There are cases where it is necessary to find more than one moment, due to loading conditions, but under ordinary circumstances it is required that the maximum moment must be determined only.

In certain cases the point where the maximum moment is to be found can be seen by simple inspection of the loading conditions, but this is not a very accurate method. In the first problem in this article, it might have been thought that the maximum moment would be under the heavier load, but the results proved that this was not the case.

There is a simple method of determining the point of maximum bending that is always used when concentrated loads are imposed on beams, This method involves the use of the shear diagram. Shear is that method of failure by which particles tend to slide by each other, as has been stated in a previous article, and the tendency toward shear is always greatest at the supports where the upward force is not counteracted by any downward load. As the position of the point moves to the right and passes the points at which loads are concentrated, the shear becomes less by the amount of the downward loads. This is represented in Fig. 16.

This is the shear diagram for the loading condition shown in Fig. 13. It will be noticed that the figure looks like a crude flight of steps. The shear at the support is equal to the reaction, and this is diagrammatically represented as the height of the left-hand "platforms." The loads shown in Fig. 13 are concentrated loads, so the shear will not be decreased in the beam until the first load is passed. Then the downward step is equal to the load or 100 pounds. The shear, up to this point, had been equal to 71.43 pounds. The downward load was equal to 100 pounds, so that at the point where the load is concentrated the shear changes from plus to minus, and when the second load, of 200 pounds, is reached the shear drops even lower and reaches a depth equal to the right reaction.

The shear diagram is comparatively simple where concentrated loads are concerned, but this particular one can be used to demonstrate a general principle. It will be recalled that the bending moment was greater under the 100-pound load, and that the shear changed from plus to minus at this point. The rule that this illustrates is that the maximum bending moment is always found at this point where the shear "changes signs," or at the point of "zero shear."

To prove this by mathematics requires a knowledge of calculus, but one can demonstrate the truth of the principle by numberless examples.

The shear diagram, Fig. 17, for the loading conditions shown in Fig. 15 is quite different from that shown in the first diagram. Here uniform loads are imposed upon the beam, and loads like this are represented in shear diagrams by inclined lines, the pitches of which correspond to the load per foot, or unit load, of the distributed weights. In the conditions shown in the two figures the pitch due to the uniform load over the entire beam is 100 pounds per foot, and a 2,400-pound drop in the length of 24 feet would be shown graphically if this were the only load on the beam. Actually there are concentrated loads that cause the shear line to drop, and the distributed load that extends over 14 feet of the beam causes a steeper pitch to the line, as shown in the figure.

It will be seen that the shear line passes the datum line at a point 1.42 feet to the right of the first 200-pound load,

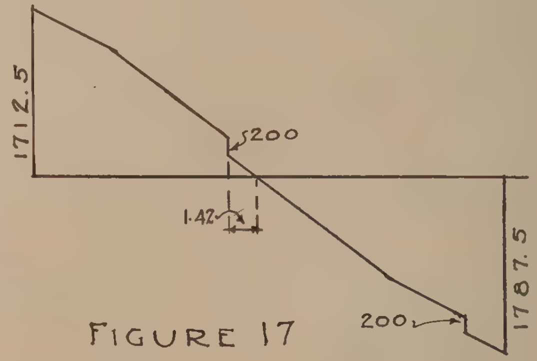
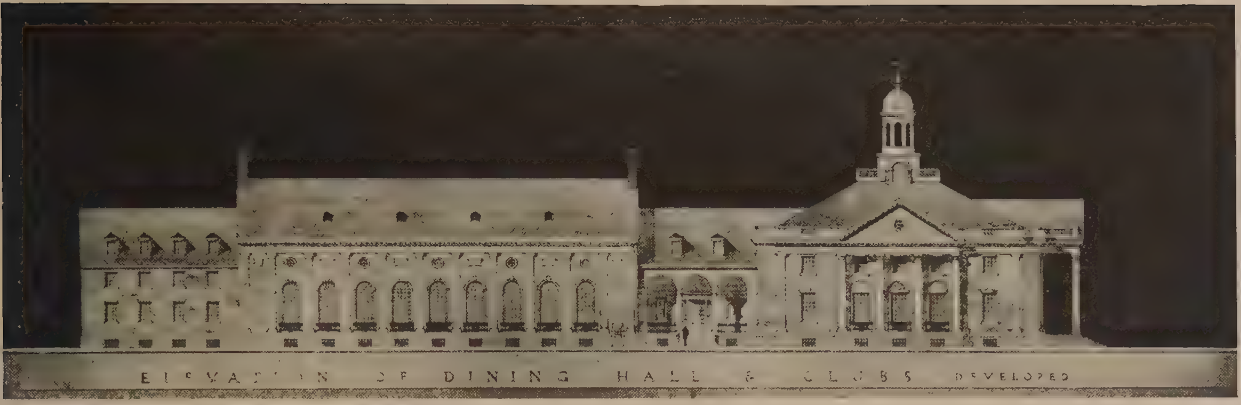


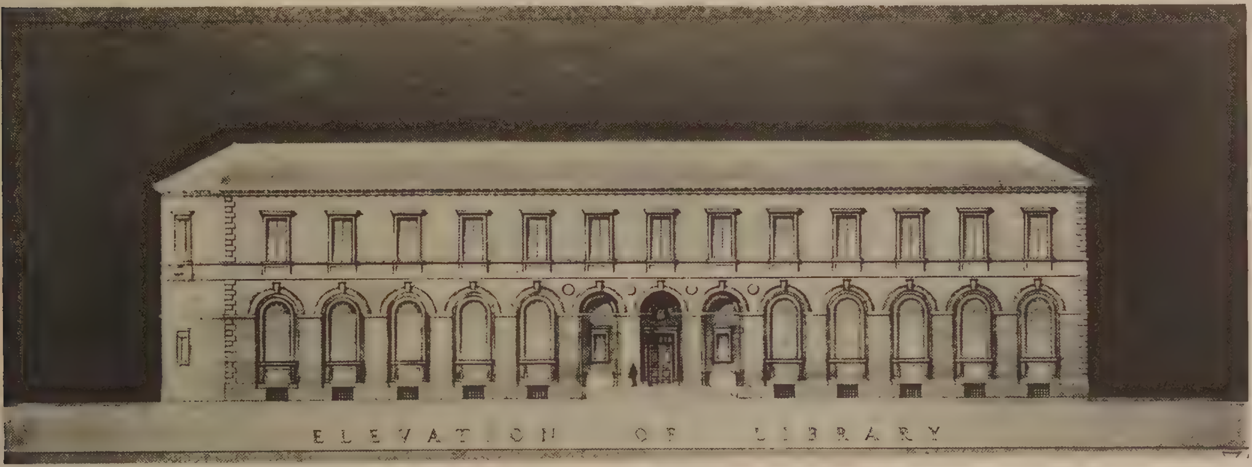
FIGURE 17

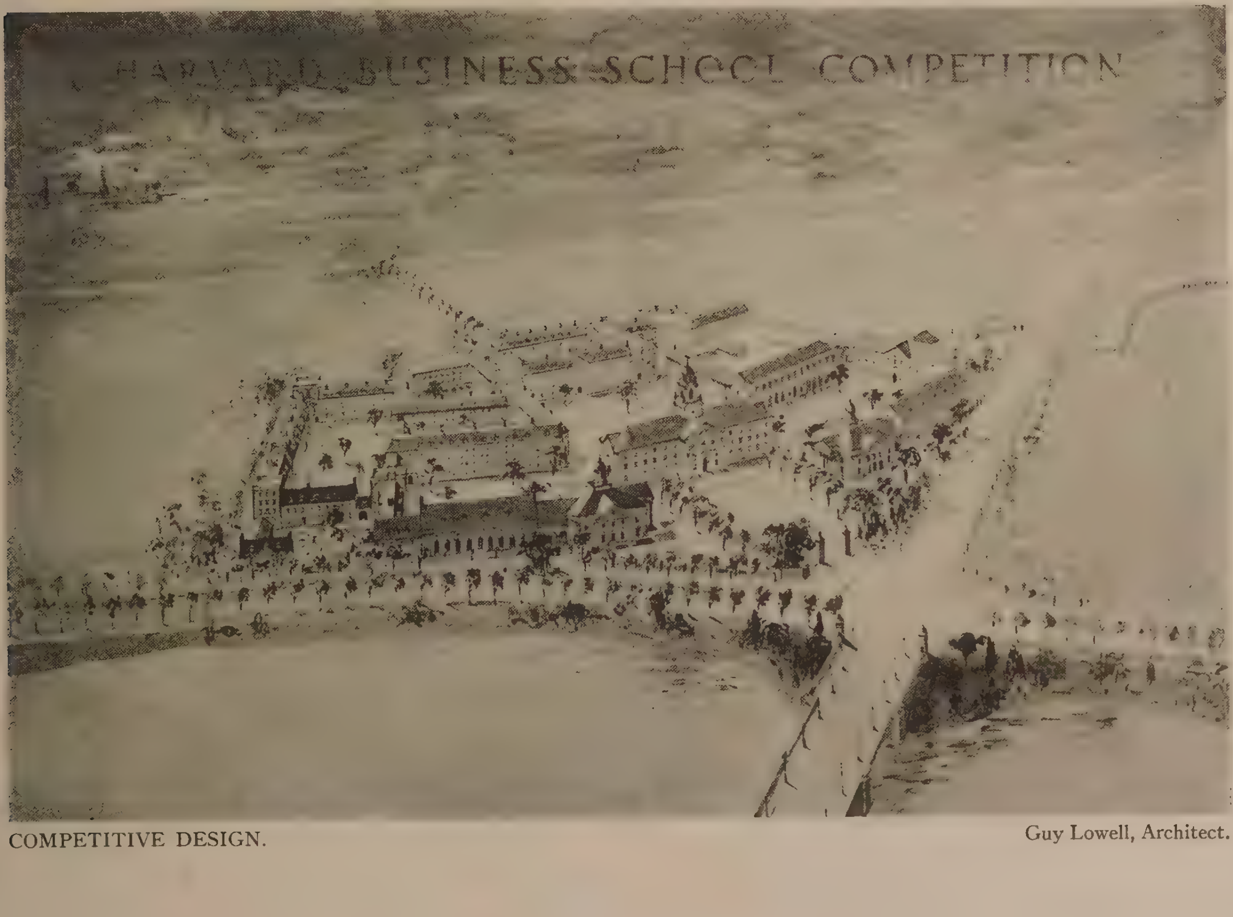
and this must be the point at which the moment is the greatest.

It will be interesting for the reader to check this result. By finding the moment at this point and at various other points on the beam, he can determine that at no other point will the bending moment be as great as that at which the shear changes sign.

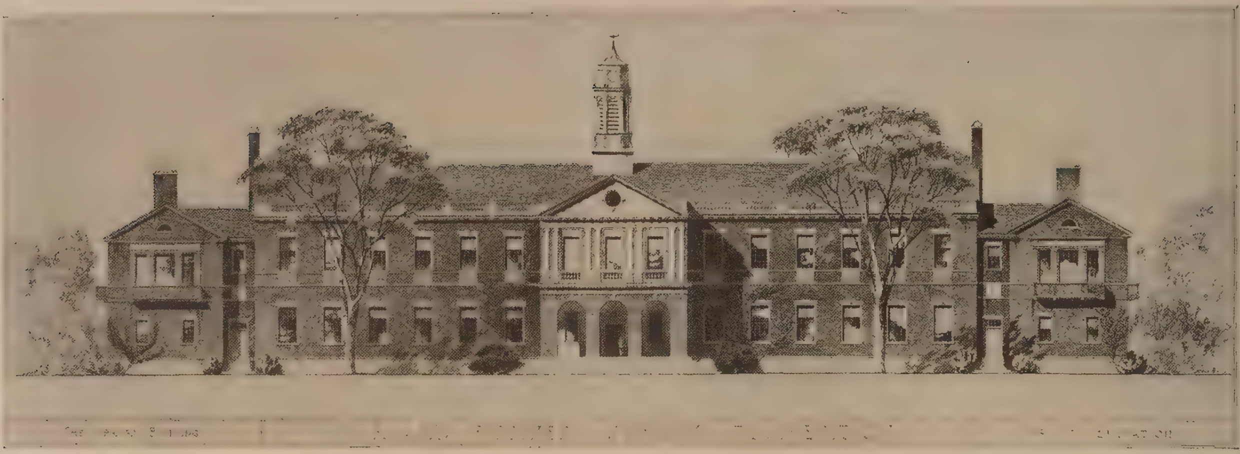
This may seem a lengthy process of arriving at a result, but engineers who use it daily become expert in laying out shear diagrams and can do this within a surprisingly short time.

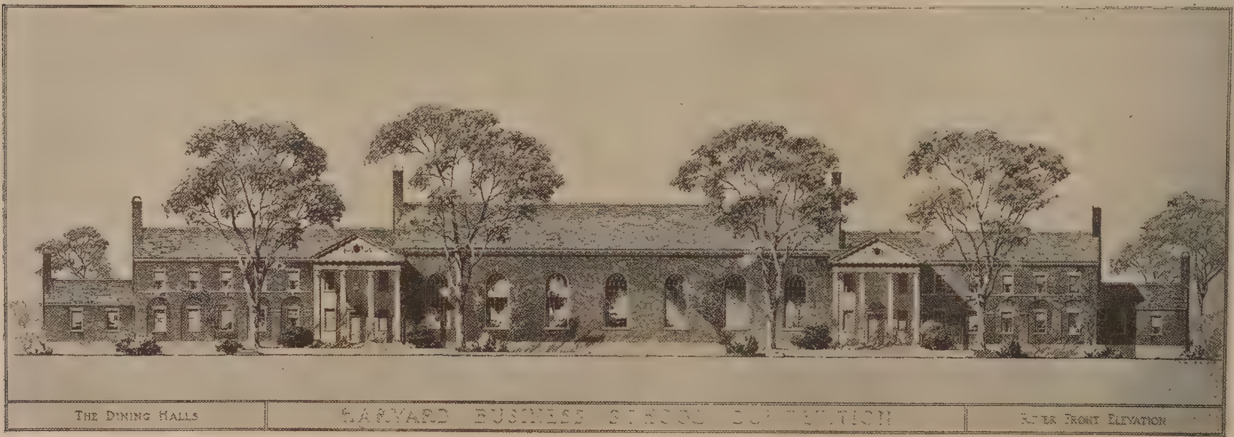


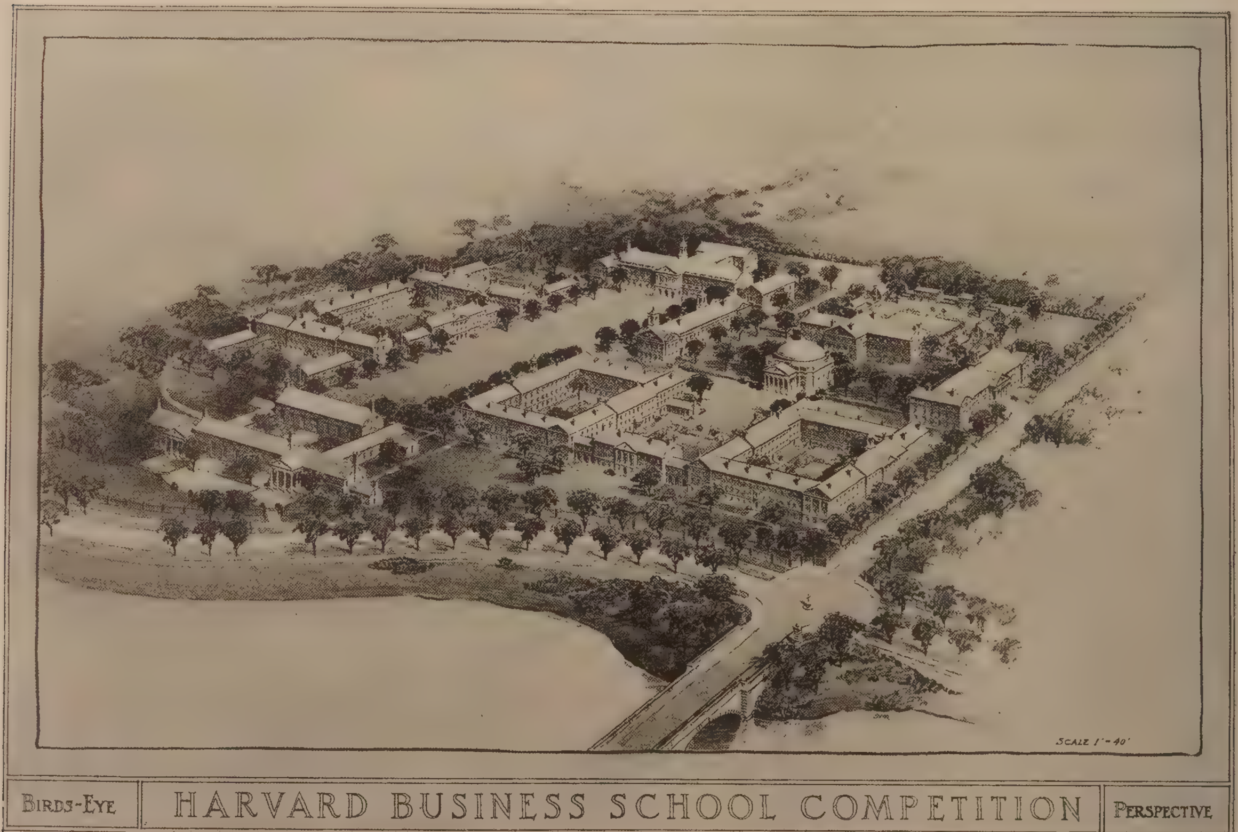




COMPETITIVE DESIGN. Guy Lowell, Architect.







COMPETITIVE DESIGN. Aymar Embury II, Architect.

The Allied Architects Association of Los Angeles

THE Allied Architects Association, of Los Angeles, has passed through its second year of active work. During this period it has grown steadily in public favor, and is now established as one of the responsible and substantial organizations of Los Angeles. That it supplies a needed and useful public service is evidenced by the rapid recognition and the continued confidence it has received from civic officials and the various organizations with which it has come in contact. Its purpose and aim to produce a finer public architecture in southern California and, by the example of its procedure, to make the practice of its members a better service to their clients, is well begun. Whatever the association accomplishes depends entirely on the attitude and activity of the members, and the things it has done have been possible only because the members have been intensely loyal to the principles upon which it was founded. The giving of service together has made the work a joy and has brought about an unsuspected comradeship among the members—that fine fellowship which comes only from working one with another in order that something well worth while shall be accomplished; that true fellowship which brings the members closer in friendship and mutual understanding and makes them better and broader men.

The spirit of the Allied Architects Association, of Los Angeles, has gone far and permeated many parts of the country. I have just returned from a series of conferences with architects in various cities, and I was surprised to find how widely the association was known and how its progress was being watched. Its purposes are often misunderstood and its methods maligned; nevertheless, its ideals appeal to the imagination of the architect and the public and, because in actual practice the carrying out of these ideals has proven to be a reasonable business procedure and not entirely an altruistic theory, the appeal has been to their sound business judgment as well as to their imagination. The association has grown steadily in public esteem.

Sand Lime Brick Makers Adopt Simplified Size

FOLLOWING the example set by the face brick and common brick industries, the Sand Lime Brick Association, at a convention held recently in Toronto, Canada, adopted recommendations to the effect that, beginning August 1, they would concentrate on one "recognized" size of sand lime brick. This size will supplant forty-five varieties now made, and will be eight inches long, three and three-quarter inches wide, and two and one-quarter inches thick.

The action was taken as a result of co-operation of the Division of Simplified Practice with the industry, the distributors, and the consumer interests.

H. Ross Colwell, of the division, who represented the Department of Commerce at the Toronto meeting, reported that the sand lime brick industry was wholeheartedly in favor of the simplification project, recognizing the necessity, in the interests of competition with other products, of a standard size which would be known to all architects, builders, contractors, and engineers in construction work.

Specifications for Asphalt Prepared Roofing

SPECIFICATIONS for asphalt prepared roofing, based on the results of investigations conducted by the Bureau of Standards, Department of Commerce, have been adopted by the Federal Specifications Board to serve as United States Government Master Specifications for the purchase of this material.

Two weights of this roofing have been covered by the specifications, medium and heavy weight, averaging 45 and 55 pounds respectively per 108 square feet of area. The detailed requirements specified cover appearance, maximum and minimum weight, pliability, and behavior of the roofing on heating. Requirements for the dry felt from which the roofing is to be prepared are also given, and correspond to Nos. 48 and 60, respectively, for the two weights. Specifications for the nails and lap cement used in applying the roofing are also given, together with methods for its inspection, sampling, and testing.

The investigations on which these specifications are based have been in progress at the Bureau of Standards for four years, and have covered all types of bituminous roofing. They have been made in co-operation with the manufacturers and large consumers of the materials, and with government departments interested in them.

These specifications are given in Circular 192 of the Bureau of Standards. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. The price is five cents, cash.

Paint

Should Not Be Applied When Plaster Is Fresh, Bureau of Standards Finds

THAT oil-paint applied to the surface of fresh-lime plaster has a decided tendency to hinder the setting of such plaster is one of the conclusions drawn from a series of tests made by the Commerce Department's Bureau of Standards. The setting of the plaster results from the absorption of carbon dioxide from the air and the resulting change of the hydroxide, or slaked lime, into limestone.

This absorption of carbon dioxide is very greatly hampered by the paint film, the bureau finds. It is retarded, but not seriously, by a finish coat, and takes place more rapidly in lean mortars than in rich. The combination of a finish coat with a film of oil-paint on top of it was subsequently tried, and was found to prevent the absorption of carbon dioxide almost entirely, cubes of plaster in this way showing no appreciable penetration of carbon dioxide after a period of six months.

In all, 144 two-inch cubes were made for the test. Four different types of lime were used, and the mortars were made in three different proportions of sand and lime. Twelve cubes were made from each mortar, of which four were left as moulded, four were covered with a white finish coat, and four were covered with an oil-paint. One-fourth of the cubes were tested each month to determine the condition of the lime and the amount of carbon dioxide absorbed.

In the illustrations of the competitive designs for the Harvard Business School, shown in the March number, the one credited to "J. J. Haffner and Associates" should have read: J. J. Haffner Perry, Shaw & Hepburn Associated.

Mr. C. Howard Walker, formerly of C. Howard Walker & Son, announces that he has formed the partnership of Walker, Walker & Kingsbury, with Harold D. Walker and Frederick S. Kingsbury, for the practice of architecture, landscape architecture, and town-planning. Their offices are at 120 Boylston Street, Boston.

Westchester Gardens Apartments, Mt. Vernon, New York. *Architects:* Irving Morgan and Charles Glaser.

Bonded Floors—of *Gold-Seal* Rubber Tile and *Gold-Seal* Treadlite Tile—were installed in the main vestibule, stairs, halls, kitchens and pantries.

Bonded Floors are adaptable to almost any interior. The various types of materials, styles, sizes and colors make possible an infinite variety of designs.

In every Bonded Floor, you'll find the qualities of resilience, quietness, strength and beauty.

Bonded Floors in Westchester Gardens—

Westchester Gardens, Mt. Vernon, New York, represents the last word in suburban apartment house construction. It is only logical that Bonded Floors have been installed in this big apartment building, modern to the last detail. For these floors not only help to achieve a luxurious atmosphere, but also insure the comfort and quiet underfoot so agreeable to discriminating tenants.

Consideration for beauty and utility in equal degree explains the increasing popularity of Bonded Floors for buildings of every description, commercial as well as residential. Patterns are available that harmonize with any decorative plan.

Proper installation of resilient floors is essential to their durability. You are sure of it in Bonded Floors. Pledge of this is our background of specialized experience and thousands of satisfactory installations. And further assurance is the surety bond against repair expense, obtainable with every floor installed according to Bonded Floors specifications.

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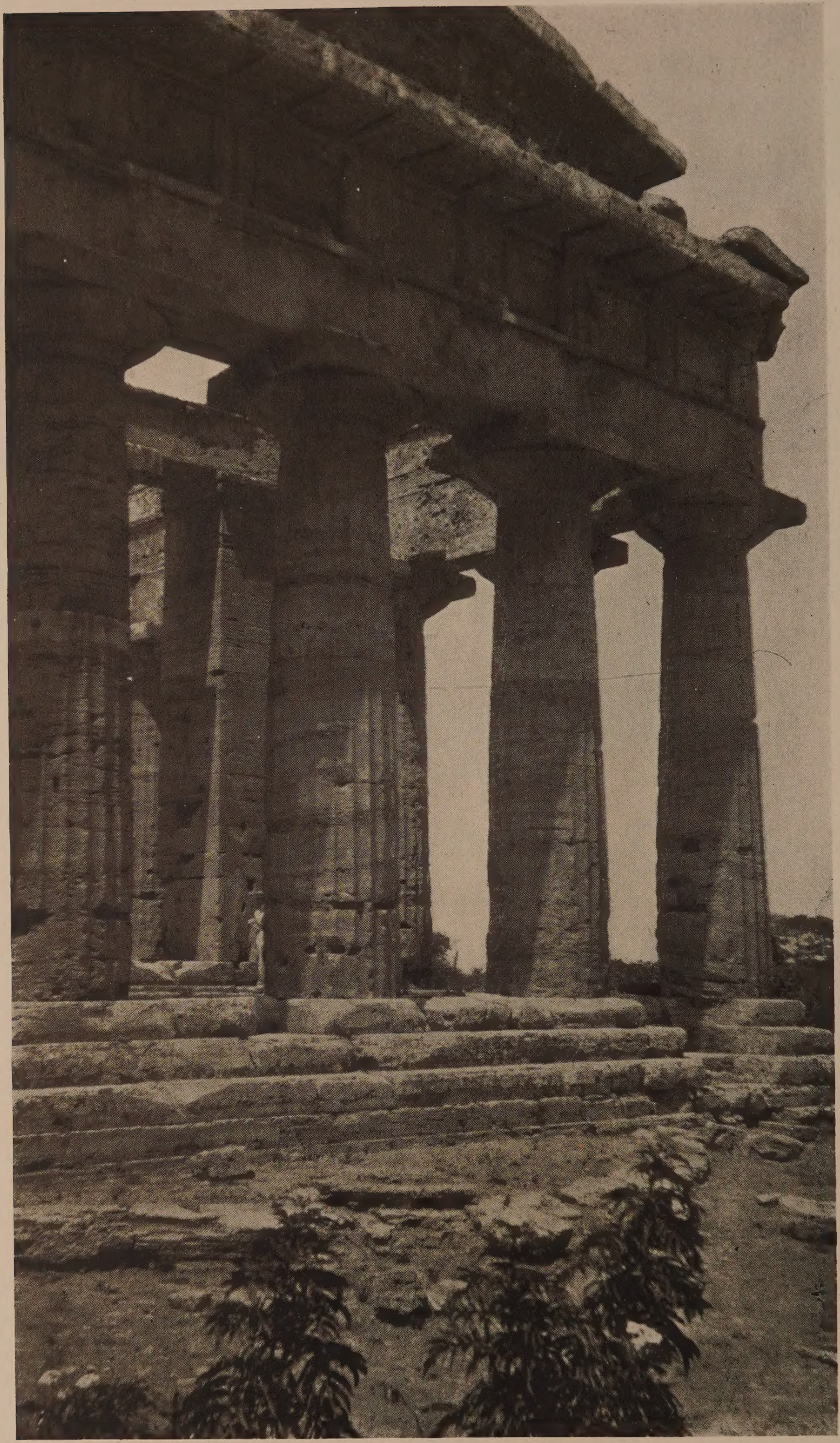

DETAIL, TEMPLE OF POSEIDON, PÆSTUM.